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Dendritic uraninite in quartz, etc.
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March - April 1956

Whole Number 231

66th LIST OF MINERALS

MEIONITE, Vesuvius. Well xld. on rock. $2\frac{1}{2} \times 2$	\$3.00
ANDREWSITE, Cornwall. Small mamm. aggregates on ore. $2\frac{3}{4} \times 2$	7.50
SCHIRMERITE, Colorado. Disseminated in Quartz. $2\frac{1}{2} \times 2$	2.50
DANBURITE, Danbury, Conn. xld. in mass. 3×2	3.00
INESITE, Sweden. Radiating xlline. on ore. 2×2	3.50
AXINITE, France. Well xld. 3×2	5.00
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RAMMELSBERGITE, Mansfeld. Solid xlline. mass. $2 \times 2 \times 2$	4.00
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SMITHSONITE, Sardinia. Portion of yellow stalactite. $3\frac{1}{2} \times 1\frac{3}{4} \times 1\frac{1}{2}$	3.50
SARTORITE, Binnenthal. xls. in cavity of Dolomite, $2\frac{1}{2} \times 2\frac{1}{2}$	3.50
EUCHROITE, Libethen. xl. aggregates on matrix. $2\frac{1}{2} \times 2$	6.00
ANDALUSITE, Tyrol. Group of large (up to $1\frac{3}{4}$ ") xls. $3\frac{1}{2} \times 2$	3.50
LEADHILLITE, Leadhills. xld. with LANARKITE, etc. 3×2	6.00
SARKINITE, Langban. xlline. mass in ore. $2\frac{1}{2} \times 1\frac{1}{2}$	2.50
PHOSPHOPHYLLITE, Hagendorf. xls. in matrix. 3×2	7.50
IDOCRASE v. CYPRINE, Norway. Blue xlline. masses in rock. $3 \times 2\frac{1}{2}$	2.50
CALCITE ps. ARAGONITE, Sicily. With Sulphur $3 \times 2 \times 2$	3.00
WENZELITE, Hagendorf. xld. on KRAURITE and Quartz. $2 \times 1\frac{1}{2}$	5.00
CUPRITE, Bisbee. xld. with Copper. $2\frac{1}{2} \times 1\frac{3}{4}$	3.00
EPIDOTE v. WITHAMITE, Scotland. Micro. xld. in rock. 4×3	3.00
ROTTISITE, Röttis. Green mass, perh. ident. w. GENTHITE. $2\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{2}$	3.00
PIEDMONTITE, Piedmont. xld. in rock. $2\frac{1}{2} \times 1\frac{1}{2}$	2.50
SULVANITE, Utah. Xls. in rock. 3×2	5.00
CERUSSITE, Tsumeb. $1\frac{1}{4}$ " xl. group.	2.00
ANGLESITE, Tsumeb. 1 inch xl. group	2.00
WAVELLITE, Co. Cork, Eire. Green & brown mammillary mass. 3×2	3.00
MUSCOVITE v. MANGANMUSCOVITE, Finland. Xlline. granular mass. $2\frac{1}{2} \times 2$	2.00
DIASPORE, Chester, Mass. Platy xlline. mass. w. Chlorite. 3×2	3.00
FRIEDELITE, Sterling, N. J. With micro, xld. surface on ore, $2\frac{1}{2} \times 1\frac{1}{2}$	5.00
MOSANDRITE, Norway. Xlline. mass in matrix. 2×2	3.00
SPENCERITE, Salmo, B.C. Xlline. mass. $2 \times 1\frac{1}{2}$	6.00
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PERCYLITE, Chile. Xlline. w. some micro. xls. in rock. $2\frac{1}{2} \times 1\frac{1}{2}$	3.50
TYUYAMUNITE, Russian Turkestan. Coating rock. $3 \times 2 \times 2$	3.50
MOLYBDEDENITE, Ontario. Xld. in matrix of Scapolite. 3×2	3.00
CHILDRENITE, Tavistock, Devon. Small xls. on rock. $2\frac{1}{2} \times 2$	5.00
ANATASE (OCTAHEDRITE), Binnenthal. Brilliant small xls. on rock. 2×2	5.00
EULYTITE, Saxony. Micro. xls. in matrix. $1\frac{1}{2} \times 1$	2.50
ALLEMONTITE, Allemont, France.. Solid mass. $2 \times 1\frac{3}{4}$	3.50
SPHENE (TITANITE), Ontario. Large xl. aggregate. $2\frac{1}{2} \times 2$	2.50
IDOCRASE (VESUVIANITE), Urals. Bright green xlline. mass. 3×2	3.00
LAMPROPHYLLITE, Kola Peninsula, Russia. Xlline. in rock. 2×2	3.00
APATITE, Bohemia. Numerous small lilac xls. on rock. $2\frac{1}{2} \times 2$	3.00
HULSITE, Alaska. Xlline. in Idocrase. $2 \times 1\frac{1}{2}$	2.50
CERUSSITE.. Phoenixville, Pa. Xls. in ore. $1\frac{1}{2} \times 1\frac{1}{2}$	2.50
APOPHYLLITE, French Creek, Pa. In sharp tabular xls. on rock. 4×3	2.50

HUGH A. FORD

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No list furnished, but inquiries for specific minerals welcomed.

ROCKS and MINERALS

PETER ZODAC, Editor and Publisher

America's Oldest and Most Versatile
Magazine for the Mineralogist, Geo-
logist, Lapidary.

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CHIPS FROM THE QUARRY

ATTENTION SUBSCRIBERS!

ROCKS and MINERALS come out once every two months as follows:

Jan. - Feb. out about.....Feb. 20
March - April, out about.....April 20
May - June, out about.....June 20
July - August, out about.....Aug. 20
Sept. - Oct., out about.....Oct. 20
Nov. - Dec., out about.....Dec. 20

Coming Events

May 5, 6, 1956—Los Angeles Lapidary Society Show, Van Ness Playground Auditorium, 5720—2nd Ave., Los Angeles, Calif.

May 11, 12, 13, 1956—Texas Federation Annual Gem and Mineral Show and Convention, City Coliseum, Austin, Texas. For further information contact Bill Odom, Route A, Box 32 C, Austin, Texas.

May 5, 6, 1956—Los Angeles Lapidary Society June 8, 9, 1956 — Wyoming State Mineral and Gem Societies Show, Laramie, Wyo.

June 14, 15, 16, 1956 — Rocky Mt. Federation of Mineral Societies Show, Rapid City, S.D.

July 12, 13, 14, 15, 1956 — Midwest Federation Convention. Home activities Bldg., Minnesota State Fair Grounds, St. Paul, Minn. LeRoy Peterson, Program Chairman, 2626 Riverside Ave., S., Minneapolis 6, Minn.

July 29, 30, 1956—North Lincoln Lapidary Society will hold its 14th Annual Agate Show in the Delake grade school on Highway 101, Delake, Oregon.

Sept. 28, 29, 30, 1956 — Eastern Federation Convention. To be held in Baltimore, Md. Host — Gem Cutters Guild of Baltimore.

REPRINTS AVAILABLE

There have been so many requests for reprints lately that the following bit of information may be of value. Reprints can be supplied and at the following rates, approximately:

100 copies	2pages	\$3.75
100 "	4 "	7.25
100 "	6 "	10.25
100 "	8 "	12.75
100 "	10 "	15.00

All reprints must be ordered in advance, before the articles makes their appearance in print.

Find any Minerals lately?

R&M is always in need of little items on new finds in your state. If you have made some interesting finds, let us know what and where (give locality and county, if locality is a mine or quarry give its name and product).

We are especially desirous of obtaining mineral items on Alabama, Delaware, Mississippi, Nebraska, North Dakota, and Rhode Island, Please send them in!

Midwest Federation Convention — 1956

The American Federation of Mineralogical Societies with the Midwest Federation of Mineralogical and Geological Societies will hold the Ninth Annual Convention in the Twin Cities in 1956.

Date — July 12-13-14-15, 1956.

Place — Home Activities Building, Minnesota State Fair Grounds, St. Paul, Minnesota.

Host Club — Minnesota Mineral Club.

This will be the largest Gem and Mineral Show ever held in the midwest. Our exhibition facilities are the finest with three interconnected exhibition type buildings; 750 feet of tall glass-front cases for display (all enclosed and with locks); ninety (90) commercial booths and many, many more excellent features that will be advertised more fully in the weeks ahead.

LeRoy Peterson
2626 Riverside Ave. So.
Minneapolis 6, Minn.
Program Chairman

Attention Subscribers

When you send in a change of address, please let us have your old address also. It helps us in locating your name in our files.

Collecting At Mount Isa, Australia

By HOWARD T. SMITH

53 Muston Street, Mosman, N.S.W., Australia

Mount Isa, Queensland, is the second largest producer of silver-lead-zinc and the largest producer of copper in Australia, though unlike the famous Broken Hill in New South Wales it has never been famous for mineral specimens. But that does not mean that good specimens are not to be had.

Recently I was able to spend some time in the area making the 2000 mile journey from Sydney by air and found not to my surprise that it was a veritable collectors' paradise. I located only one other collector in the whole area and he was a field geologist who rarely if ever went down in the mine.

Mount Isa is situated in what is known as the Mount Isa-Cloncurry mineral belt, a tract of land comprising probably 10,000 square miles of highly mineralised terrain, dotted with small mines whose output is mostly treated at the Mount Isa smelters. The copper smelters here are the largest in Australia and the Mount Isa Mines alone are producing nearly one and a quarter million tons of copper and lead ore a year.

The whole area is still being developed, of course, and the first uranium lease was pegged on March 14, 1954. Since then there have been many other radioactive discoveries, one recently being sold to a mining company for a quarter of a million pounds, plus 20% of the shares in the company and 5% of the net profits!

Besides silver, lead, zinc, copper, and uranium, the mineral field produces mica, beryl, gold, cobalt, limestone, silica and small amounts of cadmium and manganese.

Through the courtesy of Mr. G. B. Fisher, Chairman of Mount Isa Mines Ltd., I was able to roam the underground workings of the mine at will, and was also able to accompany prospecting parties into the semi-desert for hundreds of miles around.

The advantages of such freedom are obvious and I was able to add quite extensively to my collection.

My first venture into the depths was to the 250 foot level. I started hunting here at half past seven in the morning and was sorry to have to leave towards evening. Quite early I was exploring a lead drive where miners had been working a few days before and was surprised at the ease with which I discovered a fissure caused by faulting about 100 feet from the face. I could hardly wait to hose the dust from the visible parts of the fissure, which tapered from about twelve inches wide at the bottom of the drive wall, and was rewarded with some of the finest specimens of cerussite that I have in my collection today. The largest crystals in one cluster I obtained were eight inches high.

This ease of detection later proved to be the rule in my wanderings underground and I obtained later some very good, though not quite so exquisite, specimens of cerussite crystallized to form a lattice pattern.

The same afternoon I removed from a vug in a copper drive some beautiful deep blue azurite crystals in a cluster about three inches square, each crystal being about a quarter of an inch high.

Various other azurite specimens were collected, and some very nice malachite in radiating fibres and crystals in cuprite.

But the prize of all was collected from a fault zone some days later. It was chrysocolla after azurite, the azurite crystal form being the beautiful needle-like form resembling a sheaf of wheat, two and a half inches long and half an inch in diameter, on dark velvety-black manganese rock sprinkled with blebs of chrysocolla. It is difficult to imagine a rarer or more beautiful specimen.

As days passed my attention was directed to lower and lower levels and al-

though minerals collected were usually not rare some really good common minerals were obtained.

Between the 800 and 1200 foot levels I discovered an abundance of pyrite crystals in a fault zone, the largest being half inches cubes, some with Iceland spar scalenohedrons encrusting them. Also clusters of tiny pyrrhotite crystals and some faultlessly clear selenite, though not crystals, filling a fissure four inches wide.

To obtain good selenite specimens I had to enlist the help of a miner with a jack hammer who gladly assisted and seemed quite amazed at the specimens we obtained. He was what we call a "New Australian", a migrant from Holland, who took a great interest in my future activities and was obviously a "Rock Doctor" in the making.

In the copper section of the 1000 foot level I obtained some quite pretty massive chalcopyrite surrounded by milky quartz and calcite, and one poorly crystallized specimen of chalcopyrite.

Down to the 1400 foot level, and here I was delighted to discover several hundred yards of drives through an intensely faulted and fractured zone. Though most faults were filled with compact calcite I did collect some quite pretty pink specimens and in a fault fissure showing only on the roof my hammer and chisel produced some almost colourless specimens of nail-head spar, the largest crystals being a quarter of an inch in diameter. However, in a crevice about eighteen inches wide, I spent about four hours collecting clusters and single crystals of Iceland spar scalenohedrons, up to half an inch long, and single Iceland spar dog-tooth crystals up to two inches high.

Not a bad haul so far, I thought, but Mr. Ron Beresford, chief field geologist at Mount Isa Mines Ltd., and formerly a prisoner of war in Changi jail, was able to direct me later to two localities underground where I found good specimens.

One selection consisted of very good galena cubes on shale and quartz, and

one I was particularly pleased with was galena in the form of a combination of a cube and octahedron, about a quarter of an inch diameter, with selenite. The galena crystals were scattered around and through the selenite which gave it a remarkably beautiful appearance.

Another specimen Ron directed me to was in a large cavity encountered during mining operations some years before. It was smithsonite in stalactitic form with smithsonite needle-like crystals, about a quarter of an inch long, clustered around the stalactite. A very rare specimen, and I had no smithsonite crystals previously. Of course, I respected Ron's request to take only one specimen.

Again on an upper level, at about 100 feet from the surface, I followed the plan drawn by "Spike" Beresford and after an hour's hard work I had half a gelignite box of filiform native copper, some specimen resembling a bird's nest. I also obtained a boomerang-shaped specimen of native copper, about four inches long with quarter inch crystals protruding on each side and resembling shark's teeth.

My next jaunt was to the open cut, known as the glory hole. Now practically worked out, this is where lead ore was obtained in the early days of the mine, and I had high hopes of finding specimens of various secondary minerals. But apart from a few small specimens of lattice-like cerussite my luck was out. However, I was able to procure some leafy native silver from a mine officer who had found it in the glory hole some years before.

That completed my collections underground and with some misgivings I made arrangements to accompany mine geologists on prospecting trips, searching mainly for evidence of radio-activity.

To get acquainted with local geography I was able to spend a week in a small Auster monoplane scouring the country for radio-activity with a scintillometer.

From the air I saw thousands of square miles of semi-arid mountain ranges, valleys and plains that I was later to cover on the ground.

The nature of the flora made prospecting very much easier than usual. Trees were sparse and stunted, and grasslands were few. Mostly the country is covered by tufts of spinifex, or just nothing but gibbers, with here and there a dark basalt outcrop, a quartz blow, or a dry river bed lined with tall river gums, all of which make excellent landmarks.

The time came to cover the area on the ground, a series of adventures for which I shall always be grateful. I was really seeing my own country. I had experienced the snowstorm and cold of the southern climate, the green valleys of the temperate regions, the rain forests and the jungles of the tropical north, but this was my first look at country where men can and periodically do, perish from thirst in twenty-four hours.

Three mine geologists and myself headed two Land Rovers with supplies and camping gear and guided by aerial photographs set forth armed with hammers and geiger counters.

It was surprising to find so much evidence of the aboriginal population, not long departed from this area. Surprising because of the harshness of the country where apart from waterholes perhaps a hundred miles apart, the country is dry and sun-scorched. The abos must have known the waterholes better than the animals, for they were nomadic, whereas the native fauna usually patronizes the same water-hole. I found more stone axes and spearheads than I could carry, and often came across trees where beehives had been crudely hacked out with stone implements.

Though lack of water deprived me of my daily showers, that was quite forgotten in the joy of the open spaces. And even the memory of our diet still tempts the appetite. Plain turkeys, or bustards, roasted in the camp oven, grilled pigeons, stewed parrots, bird-egg omelette and kangaroo steak cooked on a gidyea-wood fire. Oh boy! What feasts we had! Various native plants and fruits made up the balance. More often than not the canned foods were left untouched. And each member of the party usually

had a pet for the week, anything from a baby alligator to a "joey", or baby kangaroo. We were surely thriving in the freedom from civilization's conventions, and glorying in the sun and open air.

But it was, of course, an excellent trip from the mineral collecting point of view, though most specimens were collected on or near the surface and had been subjected to the ravages of weathering.

Scintillometer readings had guided us to an area which our geiger counters quickly established as being highly radioactive. The country rocks were limestone, and the radio-active mineral were later identified as davidite showing, on assay, 8% uranium oxide. The limestone at the surface had weathered away leaving pebbles of davidite scattered over the area like a pebble beach.

A quarter inch square of davidite would give 500 counts per second on the geiger counter. Leases were pegged, and I spent many hours with hammer and chisel managing to obtain several good crystals of davidite which had been imbedded in the soft limestone. Here also I obtained some very good jasper, and some clear botryoidal hyalite from a cavity filling in what had once been an underground stream. This site, I should think, would have been a good one for a bore, as the stream is probably still below the surface.

We visited, in due course, other radioactive leases where development work was in progress, and I was able to obtain some mediocre specimens of carnotite, torbernite, alsite and a quartzite showing bequerelite in thin section, with gummite staining.

But most of my finds were unexpected and away from the radio-active areas. One, a perfect doubly terminated quartz crystal, came to light as I was idly examining a heap of pebbles on a flat between two hills. I subsequently found, on the same flat, a number of less perfect crystals of citrine, amethyst and rock crystal, the largest being about an inch long. In the course of time specimens suitable for my cabinet came to

light of very nice actinolite and epidote, and some very pretty chrysocolla from an abandoned copper mine. Idly knapping at schist, a fractured surface revealed a perfect octohedron of magnetite, soon identified for certain with my compass, and I loaded the Land Rover with as much of the rock as was safe to carry. We made camp an hour or two before sundown that evening, and the four of us set to with hammers crushing the schist and extracting dozens of very fine magnetite crystals, some one and a quarter inches from end to end.

With two days left in which to finalize my collection sorties, I was determined to visit a disused beryl mine about five miles out from Mount Isa township. It was worth the trip. I borrowed a car, filled some water-bags, and arrived on the scene at about nine in the morning. The mine was situated in a pegmatite outcrop and although I collected only a few good specimens of restricted variety,

the area held such promise and had such a large variety of minerals to examine that I was busy all that day and the next.

For my cabinet I collected two excellent tourmaline crystals about two inches long, about twenty rough garnets, and several beautiful specimens of transparent red garnets, about a quarter of an inch diameter, in clear, green mica.

Strangely enough, I did not bring away any beryl as it was too difficult to separate the crystals from the matrix, and anyway I already have some exquisite perfect crystals of clear green beryl in my cabinet, so I was rather selective.

After the diligent and most successful chase, I felt rather justified in sucking a few ales in the local "boozer" with my newly aquired friends on my last night in Mount Isa, and I had a feeling I was leaving a lot behind as I boarded the plane for the sunny twelve-hour flight back to Sydney next morning.

OKLAHOMA ZIRCON LOCALITY

By WALTER BUSCH

43-32 Elbertson St., Elmhurst 73, N. Y.

Oklahoma is the locality for this interesting zirconium pegmatite. It is hard for many to believe that a zircon pegmatite exists in this state, as this state is best known for its lead and zinc minerals. It is not known who originally discovered this deposit, but it was reported by Frank Rush, a forest supervisor of the Wichita National Forest in 1907. This deposit was later prospected by Hackney & Son of La Harpe, Kansas. Some sources give the width of this pegmatite dike at 30 feet, but it is believed to be considerably smaller. A mass of white quartz cuts through this pegmatite dike. The zircon crystals reach a maximum of nearly an inch, though most of them are much smaller. They are simple pyramids, with prism faces almost absent. Nearly all of the crystals are deep reddish-brown, but a few are yellowish to nearly colorless.

The most convenient way of reaching

this deposit is by the way of Indianoma, Oklahoma, on U. S. 62. At the gas station in Indianoma, turn into the dirt road going north for 5.2 miles. At 5.2 miles the road will fork to the left. Approximately 2 miles west on this road will bring one to a cross-road. Turn right on this road and about a mile further will bring one to the Ashton Ranch, whose driveway is conspicuous in having 2 rock posts on either side of it. Further the house is built of stone, so it is hard to go amiss here. Inquiry at the Ashton Ranch will enable one to locate this deposit. It is situated in the first row of hills about $\frac{1}{2}$ mile due east of the Ashton Ranch.

The most prominent feature of the mine is its water filled shaft. The shaft is probably not much more than a dozen feet deep. A considerable dump still remains intact. As the surface of the dump has been depleted of zircon xls by visiting collectors, it will be necessary

to do some digging. It's possible by closely examining the ground in the vicinity of the shaft to find small zircon xls. This is best seen after a light-shower. By panning the gravel in the vicinity of the shaft, it is also possible to find nicely xld zircon crystals.

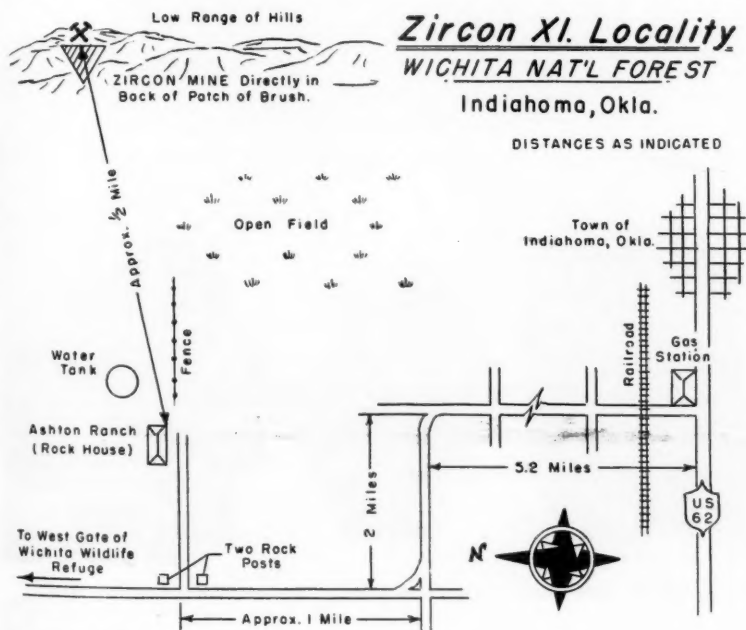
The Wichita Mts. are interesting rock formations. In the vicinity of Indianoma the rock is a typical granite. In the northeastern part, it changes to a granular limestone.

It will be seen that when the flanks of Wichita Mountains are viewed closely, they would seem to consist of huge spherical boulders piled one atop another. The main mass of the Wichita Mts. are composed of igneous rocks, chiefly granite, gabbro and anorthosite. Some of the granites are considerably jointed and fractured so that large angular blocks then weathered down to spherical boulders by exfoliation. Evidently before the mountains weathered down to their present level considerable masses of these boulders were accumulated and transported, probably by gravity and rapid streams,

and are now redeposited on the flanks of the mountains. This process of weathering by exfoliation is characteristic of some rocks, including some types of granite. In this process atmospheric weathering affects the surface of the rocks causing layers to peel off. This is, of course, a somewhat slow process but with enough time large boulders will exfoliate to much smaller than the original size and tend to become more rounded as they grow smaller.

This occurrence of zircon pegmatite is noteworthy in the fact that only 2 similar occurrences occur in the U.S. One in Virginia occurs as a zirconium sandstone and the other occurring near Tuxedo, N. C., is a zircon pegmatite. Also interesting to note is that much of the material on the dump is composed of massive zircon, that is the zircon did not get the chance to crystallize completely out. This deposit is only of mineralogical interest as not enough of it occurs to make mining for it feasible.

Editor's Note: The zircon mine near Indianoma is in Comanche Country, in southwestern Oklahoma.



MINNESOTA STAUROLITES

By ALBERT C. HOLLER

3514 Taylor St., N.E., Minneapolis 18, Minn.

Staurolites because of their twin crystal form in the shape of cross are valued collectors items. The mineral name staurolite is derived from the Greek meaning "cross" and "stone".

Single, 90° twin, 60° - 30° twins and multiple twin crystals occur in nature. Figure I shows typical crystals as they are found in Minnesota.

At Royalton, Minnesota, near Little Falls (the birthplace of Charles A. Lindberg) Staurolites are found in abundance. Along the Mississippi River at the Blanchard Dam an outcropping of mica schist occurs. The Staurolite crystals are found in this schist. As the schist is decomposed by the elements the Staurolites which are more resistant to the decomposition are washed out from the schist. With a little hunting one can find the crystals along the river banks. A better method which was found to

yield more Staurolites with less work was to shovel the decomposed schist, sand, etc., onto a $\frac{1}{4}$ " screen and wash away the soil, schist, etc., in the river. Figure II shows the "mining" operation. On dumping the screen, many single crystals as well as twins (crosses) can be picked out. Large single crystals are plentiful. Rare are the large perfect twin crystals.

It seems that the best time of year to hunt Staurolites at the Blanchard Dam is in Fall when the water is low. Little pockets of good crystals are usually found between the large rocks under the railroad bridge. "Mining" operations on these pockets give results which would please the most avid rockhound.

Other minerals found nearby are massive quartz, and small books of mica. Garnets have been reported, but have not been found to date by the writer.



Fig. I Typical crystal forms of Staurolites found at Blanchard Dam, Royalton, Minn.



Fig. 2 "Mining" staurolites at Blanchard Dam, Mississippi River, Royalton, Minnesota.

Very pleasantly surprised!

Editor R&M:

To put it frankly, I have not been so pleasantly surprised in a long time as I have been recently. When I wrote you asking for a sample copy of R&M and information as to a source of soapstone for carving purpose, I little expected the results that I have obtained.

You printed my letter in the Jan.-Feb. issue. To date I have received letters from eight different people telling me where I can send for carving material. Many sent me samples. I am going to repay them for their postal expenses (this seems to be the proper etiquette according to R&M).

I never expected to be listed in "Where to get it" section of R&M. I am trying to say "thank you" and at the same time am entering my subscription for a year.

Carl Sharard,

RR 4

Ann Arbor, Mich

March 17, 1956

Mrs. Earl L. Drottz

(Obituary notice)

Mrs. Earl L. Drottz (Marge to all her friends), former Secretary of Central Iowa Mineral Society, passed away Jan. 5, 1956, after a three months illness.

A lovely, talented person, Marge will be greatly missed by everyone who knew her. Her home was in Iowa Falls, Iowa.

Mrs. R.G. Hays,
Buffalo Rd., Rt. 1,
Des Moines, Iowa

Father's favorite magazine — R&M!

Editor R&M:

Enclosed please find money order for \$3.00 as renewal payment of my subscription. My children think R&M is rather high brow but they passed the hat around and as a result father's favorite magazine is fixed up for another year.

Fed. 13, 1956.

Guy C. Giddings,
Burt, Iowa.

TEZONTLI ROCK

By RONALD L. IVES

251 Lincoln Ave., Palo Alto, Calif.

In many parts of the southwestern United States and northwestern Mexico, the older buildings are constructed of a mixture of adobe and stone. Among the stones referred to in the older mission records is *tezontli*, a material not adequately defined in most geological texts.

In modern local usage, *tezontli* is almost any lithic material other than granite and marble. Originally, the term, probably of Nahuatl (Aztec) origin, apparently referred to a specific rock. Careful inquiries disclosed that the material was probably spongy *malpais*, or basalt.

During the progress of some historical researches, a positive identification of *tezontli* was made possible, due to the clear writing of Fray Manuel de la Oyela y Velarte, a Franciscan missionary who was an official witness to the discovery of the peninsularity of California, previously thought to be an island.

Father Velarte (more correctly Father Oyela), describing the terrain of the Sierra de Santa Clara, states "--- was a sort of rubbish heap of *tesontli* stone, like all of this very great mountain ---". The Sierra de Santa Clara is clearly shown on Kino's famous map "passo por Tierra a la California", drawn in 1701, and is now known as the Pinacate Peaks, adequately described in the modern works of Lumholtz and Hornaday.

Several visits to the Pinacate region, using terrain information furnished by Mr. Alberto Celaya, of Sonoyta, Sonora, disclosed that the old missionary accounts were surprisingly accurate; and on another trip to the region, made in company with Mr. Ygnacio C. Quiroz, of Bahia la Cholla, Sonora, Mexico, samples of *tezontli* were collected for further study.

General appearance of *tezontli* in place is shown in Fig. 1, a photograph of a typical basalt flow on the northeast flank of the Pinacate Peaks. Lava of this type, flowing from parasitic craters at the base of the Pinacate Peaks, covers more than 1500 square miles of the Sonoran Desert.

Detailed appearance of a hand specimen of *tezontli* is shown in Fig. 2. Tests of various samples of this show that it is slightly harder than window glass, and that its specific gravity, in bulk, is from 1.8 to 3.3, most of it being below 2.3. Due to flow stresses and cooling cracks, massive *tezontli* weathers into "nigger-heads" usually less than 18" in diameter, but individual pieces, not containing either flow shears or cooling cracks, are extremely strong and resistant to erosion. Lithological classification of *tezontli*, checked by the U. S. Geological Survey, is "scoriaceous basalt".

The porosity of this material, causing its low specific gravity, is due to the large amount of gas confined in the lava as bubbles when it cooled. Occasional voids up to 12" in diameter can be found in the flows, and much larger bubble cavities, perhaps five feet in diameter, have been reported to the writer, but not seen by him.

Tezontli rock, substantially identical to that at Pinacate, is found in many parts of North America, typical Mexican sites being at the Pedregal flows, near Mexico City, and in the vicinity of Parícutin Volcano. Excellent exposures of similar lavas are found in the United States at such locations as Grants, New Mexico and south of Gila Bend, Arizona.

References:—

The Pinacate Peaks are located in Sonora, Mexico, at Lat. 31° 40' N.; Long. 113° 40' W.; 4235' above MSL approximately. Nearest supply point is Sonoyta, Sonora.

Bolton, Herbert E. "Rim of Christendom". New York, 1936, p. 554, (Father Oyela's statement).

Ives, R. L. "California no es Ysla", *Records. Amer. Cath. Hist. Soc.* Vol. 64, No. 4, Dec. 1953 (tracing of Kino's Map).

Hornaday, W. T. "Campfires on Desert and Lava", New York, 1908.

Lumholtz, Carl, "New Trails in Mexico". New York, 1912.

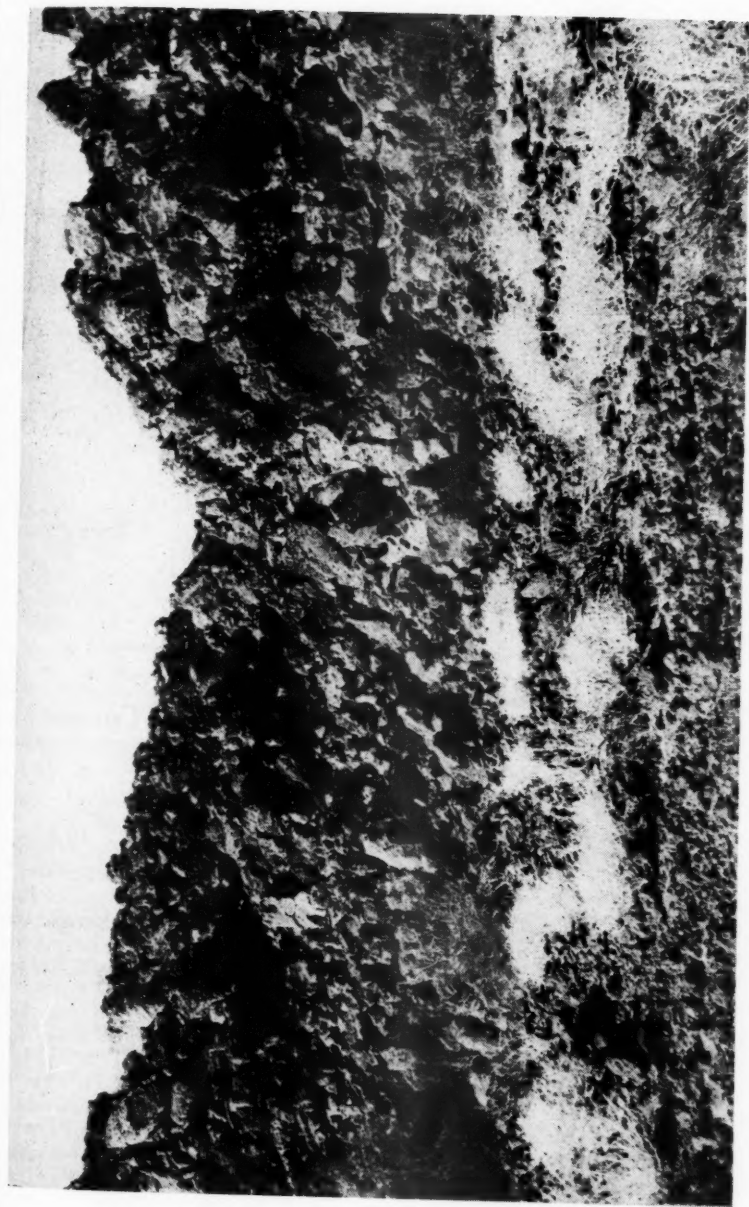


Fig. 1 — A sort of rubbish heap of tezontli stone", Basalt flow in the Pinacate lava field, Sonora, Mexico.



Fig. 2 — Hand specimen of Tezontli from Pinacate, Sonora, Mexico.

Wants Mineral Club in West Virginia

Editor R. & M.:

I am herewith enclosing the subscription price of "Rocks and Minerals" for 1956. I nearly forgot to send it and I would certainly hate to miss any of the issues. I have had so much pleasure out of last year's subscription that I really look forward to each new issue.

I only wish that there was an active Mineral Club around this territory. I would like so much to be able to associate with others that enjoy this hobby, but as far as I know there isn't any.

Do you have the names and addresses of other people in West Virginia who are "Rock Hounds"? I do a lot of traveling around the state and perhaps I could look some of them up if I were close by or at least write to some of them and perhaps make a few new friends that way.

Any help that you can give along that way would be appreciated. Thanks.

Dale M. Ingersoll,
2800 Broad St.
Parkersburg, W. Va.

Collector's Corner

For the special benefit of collectors who may be living in areas far removed from other collectors, we are opening up this feature. In this corner, a collector may have his name and address listed for the purpose that other collectors may write him in the hope that through correspondence, exchange of ideas and specimens, new friendships may be formed. Listings are free.

Joseph Jeski (13 yrs.) 676 Humboldt St., Brooklyn 22, N. Y.

Mrs. Tres. Lawhead, 3rd St., Roulette, Pa.

Walter Scott Gray, Jr. 417 S. Perry Ave., Denison, Texas.

G. W. Weber 1320 Portland Ave. Walla Walla, Wash.

A WEEK END MINERAL COLLECTING TRIP TO ONTARIO, CANADA

By JAMES SMEDLEY

Box 242, Follansbee, W. Va.

My family and I planned on a mineral collecting trip to Bancroft, Ontario, Canada in October, 1955.

We started in the evening of Thursday, Oct. 13. It had rained all day and was still raining that evening. We had hopes that it would stop before we reached Bancroft.

We arrived at Bancroft the next morning (a distance of 500 miles from home) with the rain still coming down. The only bright part of the trip thus far was the yellow leaves of the white birch. They seemed to make it appear as though the sun was coming up over the hills.

We decided to drive out to get sodalite near the York River. To get there, one must take the road from Bancroft to Herman. Driving out on this road approximately three miles, you come to two gravel pits on the left side of the road; there just up over the hill above the second pit you will come upon the sodalite locality.

When we arrived it was still raining, my two sons and daughter and I put on our raincoats and started after sodalite. Half way up to the quarry, we came upon a spot that had been previously dug. With the rain coming down, it brought out the brilliance of the blue in the sodalite. This is where we got out our chisel and sledge hammer. While I was swinging away with the hammer, my boys were wandering around in the quarry and came upon several pieces of biotite with sodalite through it.

When we decided we had enough sodalite we drove three miles further to the York River. After parking we walked a short distance down the river to an old nepheline-syenite quarry where we picked up some nepheline and plagioclase feldspar.

After a weiner roast, our lunch, we took a walk on down the river, near a spot where a geologist had told me on

a previous trip, I would find blue corundum. This we found imbedded in small masses of rock. Here we got several fairly good crystals and all we wanted for our collection. Under a long wave fluorescent light some of these pieces have a pink color that may be hackmanite. One of the scenic spots near here is a beautiful waterfall.

We crossed the river and walked down the other side about five hundred feet, where on the road were some pieces of limestone with diopside crystals. Up the side of the hill near a spot that had been previously dug were some good specimens and also some massive grossularite garnet and a few pieces that had some crystal form.

We then drove down the road where I had just picked up the diopside. Two miles on down we came to another quarry, where I had been told we could find hackmanite. Here was a plentiful supply but it was difficult to tell if it would fluoresce. This was the spot a long wave mineral light would have come in handy.

It was getting late and we wanted to drive to Wilberforce. The road from Bancroft to Wilberforce had the thrills of a roller-coaster—just a few more bumps than a wash board and what made it fun was the rain coming down. At Wilberforce we got a cabin at the Terrace Inn. Oil heated cabins that were a treat after being cold and wet all day.

The next morning my boys and I went down to a lake below the cabin and went fishing—this with the thought of hunting rocks in mind makes this trip a double pleasure. Just along the bank of this lake were large pieces of marble, which had some fine sphene crystals and black tourmaline crystals that we added to our collection.

It began to rain once more and this time we went back up to the Terrace Inn where we met a mining engineer who told me some good apatite crystals

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were in an old Fission Mine, which was being reopened for uranium. There we collected some fine blue fluorite in calcite. Some pieces almost black from the fluorite in them, others have apatite crystals in them. You must obtain permission to enter this mine which may be had usually through someone at the Terrace Inn. The mining engineer gave us a piece of uraninite, allanite, cryolite with zircon crystals, which were all highly radioactive. Above the mine on the hill were several open pits where we found large pieces of calcite which after being opened had some good apatite crystals. These make fine specimens if left in the calcite. They usually break up in small pieces if they are freed from all of the calcite. Also found a large

amphibole crystal that weighed about ten pounds.

Now that we had all the minerals we could safely haul in the car, we started back for West Virginia. On the way back we stopped to see Mr. Roy Bruley at Peterboro, Ontario. We read of him in the ROCKS AND MINERALS Magazine and after getting acquainted, we viewed his fine collection of Rocks and Minerals. We made several trades and I obtained some fine blue beryl crystals in feldspar, a cluster of quartz crystals, a piece of seyberville and some others. After we bid him adieu we started home and arrived Sunday morning—a total trip of 60 hours—AND IT WAS STILL RAINING.

MAGNIFICENT OPAL—GIFT TO KING OF CAMBODIA

A magnificent opal was a gift from the Rt. Hon. R. G. Casey, Minister for External Affairs, on behalf of the Australian Government on the occasion of the coronation of the King of Cambodia.

King Norodom Suramarit's coronation was held on the 2nd of March and he received this unique gift of one of the finest large opals to come from the South Australian opal fields. This gem was cut and polished by Mr. J. D. Altmann of Australian Gem Trading Company at their Elizabeth Street workshop and was selected by Mr. Casey personally. The opal is of rectangular shape and weighs fifty-five carats and measures $1\frac{1}{2}$ " x 1". It is kept in a presentation box with a gold plaque set into the lid which has the following inscription:—

His Majesty King Norodom Suramarit of Cambodia from
The Rt. Hon. R.G. Casey, Australian Minister of State for External Affairs

with respectful good wishes on the occasion of His Majesty's Coronation, 2nd March, 1956.

The color of the gem is a bright green with magnificent coloring of red, orange

and blue flashing over the surface of the stone. It is very rare for opals of such large size to be without flaws as is the case with this particular gem.

When Queen Elizabeth visited Australia in 1954, Altmann cut a large 203 carat opal "The Andamooka Opal" which was presented to Her Majesty set in a necklace by the South Australian Government. The opal for the King of Cambodia is of similar quality and beauty and the only other large opals of that particular type in existence have been sold by Messrs. Altmann & Cherny to a museum, some gem collectors, an Indian Maharajah and a few are still in their possession.

The opal was mined at the Andamooka opal fields in South Australia a few years ago. Tens of thousands of dollars worth of rough opal have been mined in this little desert settlement in the centre of Australia. Production, unfortunately, has continuously dwindled over the last few years. The hardships facing opal miners are such that not even the rewards of a big find can keep the miners at the field. Often months and months of hard work is put into sinking shafts down to the opal bearing level without seeing any

piece of opal at all. On the other hand it is possible that a few thousands dollars worth of rough opal may be struck within one week's work.

Opals are continually gaining in popularity throughout the world. Practically all the world's supply of opals comes from the Australian mines today.

Mr. J. D. Altmann, who has recently travelled twice around the world selling

Australian opals, is convinced that three to four times more opals could be sold annually than are being mined at the present time. To achieve this, opal mining should be encouraged actively by Federal and State Governments in Australia and conditions at the opal fields should be made more attractive so that a greater number of miners will try their luck at one of the most fascinating and romantic of all occupations—gem mining.



The magnificent Australian opal — a gift from the Australian Government to the King of Cambodia.

A NEW BRAZILIANITE LOCALITY

THE CHARLES DAVIS MINE, NO. GROTON, N. H.

By PHILIP MORRILL

To reach this mine go northwest from No. Groton village about one mile toward Cheever. After passing the cemetery, a flat valley will be reached. The mine road turns south from the center of this flat and crosses a brook, recently rerouted. The mine is about three hundred yards up hill from the town road. A Frank Davis Mine is located farther out nearer Cheever.

This mine consists of a shaft forty feet deep in pegmatite. It was operated twice in past years and in the middle of 1955 was pumped out and investigated again. The land and mineral rights are owned by the Draper Corp., Beebe River, N. H., who lease the mineral rights to the operators.

In the 1955 operation the dumps were bulldozed and unfortunately the interesting layers are now from four to six feet beneath the surface.

The writer, with Ernest Smith of Lowell, Mass., made many trips into the area back of Palermo from 1950-55 checking old mines (54 in a square mile).

After spending a fruitless day crawling through the blowdowns which make this area famous (or infamous), we decided on the way out to look at the Charles Davis Mine which had reported finding occasional lazulite xls. We found a few very minute samples.

A week or so later after another hot day and empty pockets we again stopped in. This trip resulted in some nice lazulite xls to $\frac{1}{4}$ ".

We then decided to spend a few days and give this dump a real going over. Some really nice deep blue transparent xls came out. We also broke open a mass of rusty hematite to find a pocket of torbernite xls. These were rhombs and not the scales common to this area. While not fluorescent they had the color of the fluorescent inks used on billboards . . . a rather startling green, that appeared to glow in sunlight.

We sent specimens to Mr. David Seaman at the American Museum of Natural History in New York City. He found brazilianites on one.

We then redoubled our digging. During the past few years various friends have dug out between fifteen and twenty brazilianite xls.

Among the specimens were a group of small quartz xls that with plenty of imagination showed pink. We sent these down to Mr. Seaman who identified them as rose quartz. Two other specimens were later found which were deep enough in color to be identified immediately.

Mr. Seaman made a trip up to this locality and came up with a Herderite xl which as far as we know was the only one found.

John Dillingham came over from Naples, Maine, and Herbert Kimball from Fryeburg and took home the prize brazilianite and the outstanding torbernites and autunite xls.

Minerals found at the Charles Davis Mine which we have recorded are:

Apatite xls. Gem xls to $\frac{1}{4}$ " x $\frac{1}{2}$ " that can be mistaken for gem tourmaline.

Arsenopyrite xls and small masses.

Autunite xls. Definite thick rhombs, bright yellow.

Beryl xls. Large common xls, green. Small yellow-green xls of granular structure resembling coarse apatite about $\frac{3}{4}$ " x 1".

Biotite.

Bornite. Small masses.

Brazilianite xls. Best xl is a flawless terminated very pale yellow transparent about $\frac{3}{8}$ " x $\frac{5}{8}$ ". This is on a matrix 4" x 6", the reverse side being thickly coated with small brazilianite xls. The typical xls is a point, greenish yellow about $\frac{3}{16}$ " across and on the edge of a small pocket. This is in the collection of John Dillingham. This may be

the 4th world locality.

Chalcopyrite. Small xls altering to malachite.

Hematite. Rusty, red masses with pockets and usually very radio-active.

Herderite. One xl by David Seaman.

Lazulite. Very brilliant ultramarine-blue xls. Largest $\frac{5}{8}$ ". Many are transparent but a reasonable cutting piece has not been found.

Leucopyrite. Small masses.

Manganapatite. Common rough xls in the pegmatite. (Fl. Orange.)

Muscovite. Amber plates common in dump.

Pyrite. Small xls, rare.

Quartz. Rose quartz xls and a little massive rose quartz. Possibly the first in N. H.

Rutile (?)

Spessartite (?) A garnet tentatively identified as manganesian.

Scorzalite. Some lazulite shows green and it is probable tends toward the other end of the series.

Torbernite. Best specimen found by Herbert Kimball. Rhombs to $3/32$ ".

This formation closely resembles the Smith Mine at Newport, N. H. We are therefore looking for Hurlbutite, Augelite as well as some rare uranians.

Opposite the dumps a trail leads west and about $1/4$ mile to the Plume Mine. This is a long narrow cut ending on the west end in an open pit and stopes. It was pumped out late 1955 and the new material show traces of lazulite. Farther working may be interesting.

Most of the minerals here occur only as small xls or micros. It is possible other rare minerals are present or even new ones.

We have hoped this locality would get a thorough going over by qualified mineralogists before it is destroyed by collectors who do not appreciate the minute specimens.

Dr. Frondell had planned to visit this dump but due to an error on the writer's part was unable to make contact.

So let's let the qualified collectors get a shot at this before it becomes a free-for-all for a club outing.

Fills every need of the rockhound!

Editor R&M:

I have just finished reading my first copy of my new subscription in your magazine and want to tell you how very good I think it is. It seems to fill every need for a rock-hound and mineral collector and I read it from cover to cover.

Dorothy M. Fuldner
Original Enamels and Jewelry
715 North Lakeside Drive
Lake Worth, Fla.

Keep Up The Good Work!

Editor R&M:

Enclosed you will please find a money order for (\$3). I enjoyed your magazine so much last year that I am subscribing for it again this year. Keep up the good work.

Jack M. Park
148-2nd Ave.
Yorkton, Sask.
Canada

Sept. 27, 1955

A Few Facts about Red Obsidian

In ROCKS AND MINERALS magazine for March-April, 1955, Mr. Hollis J. Gordon of Independence, Mo., wrote the editor regarding red Obsidian and glass slag, and in the July-August issue of the same magazine Mr. H. E. Miller, of Hinsdale, Mass., also wrote on the same subject.

As I have friends in Oregon who have been helpful in gathering facts about the rock under discussion, I would like to present them here so as to add to the accuracy of the records in the collectors' hobby of mineralogy.

Mr. Harry A. Weller, a deputy assessor in Grants Pass, Josephine Co., has written me that he has seen a small "flow" of the "red" in the vicinity of Newberry Crater, Oregon, as well as the larger one at Glass Buttes in Lake Co. He has also sent me a little of the material from Glass Buttes, and this is mostly red with one piece red mottled with black. Besides this I have a couple of Indian-made spear points of the mottled variety which came from Oregon some twenty-five years ago.

Added to the above is the information furnished by Mr. Harold M. Langslet, County Assessor of Lake Co., who states that the obsidian at Glass Buttes is red as well as the other colors of brown and black, and that it is found over a large area. He also says that there are no glass works anywhere near that could produce glass slag. Mr. Langslet also writes that the obsidian beds all have have claims filed on them!

I trust everyone interested in the above material will appreciate the truth of the information furnished herewith and not be fooled by any spurious stuff.

W. H. Hayes,
35-22nd St.
Irvington 11, N. J.

NOVICE COLUMN

In the Sept.-Oct. 1953 R&M, Gordon S. ViGario, 2231 Pine St., Bakerfield, Calif. suggested that a Novice Column be opened for rank beginners in mineral collecting. These amateurs, who do not know one mineral from another, may submit their names to the Novice Column.

It is our hope that collectors having duplicates may donate a few specimens to one or more novices who are expected to acknowledge receipt of specimens received and to reimburse each sender for postage paid on the packages. Please print or write plainly the names and localities of all specimens sent novices, and if 2 or more minerals appear on the same specimen, identify each. Remember the novices do not know one mineral from another, so please be as helpful as you can.

The following is the 15th list of novice collectors.

Walter L. Robinson, 4120 Mildred Ave., Los Angeles 66, Calif.

Stephen Reed, (10 yrs.), 1735 E. Claveras, Altadena, Calif.

Claudia Van Gundy (13 yrs.), 477 S.3 St., San Jose, Calif.

Frank Anagnos, 45 Sampson St., Bridgeport 6, Conn.

Robert Rodensky (10 yrs.), South Woodstock, Conn.

Stanley Dikcis, 6140 S. Talman, Chicago 8, Ill.

Joe Rose, Box 37, Hoisington, Kansas.

Fern Penner, 370 E. Main St., Peru, Ind.

Michael Ray Friend (7 yrs.), 713 Lyman Ave., Louisville 14, Ky.

Gay Elaine Thomas (11 yrs.), Roxbury, Maine

Miss Linda Sherwood (12 yrs.), 32 George St., Oxford, Mass.

Jane Booth (13 yrs.), 703 Parkdale, Rochester, Mich.

Mrs. Delbert Bluhm, 730 Mineral Springs Ave., Owatonna, Minn.

Lee E. Payne, Route 1, Willmar, Minn.

Kenneth E. Fowler, Box 448, Bayard, Nebr.

Thomas Burke (15 yrs.), 2755 Creston Ave., Bronx 68, N. Y.

Judy Jackson, 307 Garfield Ave., Endicott, New York.

David A. Houston, 3rd, Box 343, Lincolnton, N. C.

Paul D. Ingersoll, Rt. 1, Mount Vernon, Ohio.

Mrs. Ammon Schwartzbach, 2239 Logan St., Harrisburg, Pa.

James R. Broyles, P.O. Box 311, Greeneville, Tenn.

Michael S. Edwards (13 yrs.), 703 North Marable St., West, Tex.

Miss Valerie M. Bessette (7½ yrs.), 55 First St., Swanton, Vt.

Miss Erica Skinger (6 yrs.), Alburg Springs, Vt.

Buddy Hermann, (8 yrs.), 4 Seasons Club, Pembine, Wisc.

Running short of reading matter

Editor R&M:

I have just recently subscribed for your magazine and I want you to know that it is the greatest ever. I have carried it with me for a week and have read mostly all the articles in it. I will be without reading material on minerals for some time and so while I am waiting will you please send me the back numbers I have ordered for which money is herewith enclosed.

Emery A. St. Cyr,
NATTU Bks - AGA NAS
Lakehurst, N. J.

March 17, 1956

World News on Mineral Occurrences

Items on new finds are desired. Please send them in.

Abbreviations: xl—crystal xled—crystallized xline—crystalline
fl—fluoresces ph—phosphoresces

ALABAMA—In the Dec. 1955 issue of THE NEWS, official Journal of the National Speleological Society (Dorothy Reville, Editor, 124 Sanford Ave., Emerson, N. J.) appeared an interesting article, "A trip through Talucah Cave," by W. W. Varnedoe, Jr.

"Talucah Cave is located in the community of Talucah near Vahlermoso Springs, in Morgan County, north Alabama. A large portion of this cave had been mapped by the Huntsville Chapter during a series of exploration and mapping visits, the last of which was October 16, of this year."—p. 10.

The author mentions one passage in the cave called the Chime Crawl, which gets its name from the stalactites on which tunes can be played. A large sketch map, showing the numerous passages, rooms, Chime Crawl and other features is a valuable addition to the interesting article.

ARIZONA—A frequent contributor to this column is R. A. Richards, Box 44, Morristown, Ariz. Here is a letter from him, dated Nov. 26, 1955.

"Just a line to congratulate all concerned for the Novice Column idea. It is very nice and I believe fills a real need, not only for the beginner but for the rest of us also. It has been my observation that 95% of our mineral lovers are most pleased to pass along some of their duplicates to those interested. I have sent out over 50 boxes to those which have been listed in the Novice Column. For the most part I was well pleased with the replies from the recipients but there are a few who neglect to send postage—this may seem like a small item but on dozens of packages it does run up.



T. A. Richards

"I have an album, especially kept for photos of mineral collecting friends. Have been making it a point to ask for a photo, instead of postage, when I send out minerals. Results have been most satisfactory. So folks, photos gladly accepted in lieu of postage on the first package of minerals sent you.

"I have been collecting minerals in the Southwest and old Mexico for over 20 years."

ARKANSAS — Tallow clay, in dark red, tallow-like masses, and said to contain up to 6% zinc oxide, has been found in the Morning Star zinc mine near the little village of Rush, Marion Co., Ark.

CALIFORNIA—From a mine in Darwin, Inyo Co., Calif., we have a nice colorless selenite prism that was sent us by Pat Fancher, % Andersons, Darwin, Calif. In a recent letter from him he writes:

"The Darwin, Calif., mine is lead and zinc, with occasional high grade silver.

I found here, in addition to the selenite prisms (one of which was 15" long), pyrite xls up to 2", good limonite pseudos, massive anglesite rich in silver, showy caledonite and linarite, satin spar in 1" veinlets, jarosite, pyrite cubes embedded in transparent purple fluorite, and of course galena and sphalerite, the ores. I saw molds of selenite in anglesite and found for myself a big (4 x 4 x 8) anglesite with 1/2" pyrite molds. I saw also some beautiful translucent blue xls which I took to be calcite colored with caledonite."

COLORADO — Richard Schooner, P.O. Box 215, East Hampton, Conn., was a recent visitor to Colorado where he did some collecting. Here is a letter from him dated Jan. 15, 1956.

"During a recent stay in Golden, Colorado, site of the renowned Colorado School of Mines, I heard of an active uranium mine or quarry a couple of miles from town. Following the highway and several dirt roads up to Cresman's Gulch, I found a gate with a 'No Trespassing sign' confronting me. However, the owner drove up and told me I could visit the mine. On the way, I stopped to collect specimens of malachite in a pegmatite which had been blasted through during construction of the very steep road. The superintendent happened to come along, and I was spared the exhausting climb to the top of the mountain. Once there, I was kindly permitted to gather some fine specimens of autunite, torbernite, uranophane, and gummite. Furthermore, I was shown some fantastic material which had just been dug out at the contact between an otherwise ordinary pegmatite and soft schist. There were solid masses of uraninite up to 5 inches across—and some pieces with shells of orange gummite. It was the finest uraninite which I'd ever seen from a United States pegmatite."

CONNECTICUT—In his letter, dated Jan. 15, 1956, Richard Schooner, P.O. Box 215, East Hampton, Conn., gives us some more interesting information on minerals of his State.

"I'm glad to report that various tests made at the Colorado School of Mines and the American Museum of Natural History, have proven the identity of the pollucite which I discovered at the Strickland Quarry, in Portland, during 1954.

"Several institutions have received specimens from me. My own collection includes—5 x 5 x 5 inch block of completely unaltered material, resembling massive quartz. There's little wonder that the mineral was overlooked for so many years at the locality. It proved to be fairly abundant in one section of the quarry wall, intergrown with lepidolite, spodumene, pink tourmaline, and petalite . . . the latter being comparatively rare. Both petalite and pollucite are new for Connecticut. They should be added to the list of minerals which I gave in my recent article on the locality . . . '90 Minerals From 1 Connecticut Hill (ROCKS AND MINERALS, July-August, 1955, pages 351 to 358). Graphite, long known from the Bolton Schist at the Strickland quarry, should also have appeared in the list. In my map, the main road between Portland and Glastonbury ought to be 17 (and 17A), not 15 (and 15A) as I erroneously called it.

"A columnar white mineral from the contact between pegmatite and schist at the Slocum quarry, in East Hampton, is evidently wollastonite. Optical and Spectrographic tests indicate such an identity, while tremolite and scapolite are eliminated. A very small amount of allanite was found with it.

"While looking over the old State Forest Number 1 quarry, near the ancient cobalt mines, north of the village of Cobalt, I discovered a rather large mass of triphylite in the eastern wall, above a short tunnel. The triphylite was intergrown with granular siderite, quite a lot of a white mineral which is probably messelite (or neomesselite), and various metallic minerals: pyrite, pyrrhotite, sphalerite, chalcopyrite, and arsenopyrite. Alteration products of the triphylite included ludlamite, heterosite, ferri-sicklerite, vivianite crystals, and a number

of other things which haven't yet been positively identified. A very small quantity of smithsonite was present as an alteration of sphalerite. Triphylite, ferri-sicklerite, ludlamite, and messelite (or neomesselite) are all new for Connecticut."

DELAWARE — Limestone has been quarried 2 miles west of Centerville, New Castle Co., Del.

FLORIDA — Howard B. Graves, Jr., 826 S. Ingraham Ave., Lakeland, Fla., has sent us a specimen of flint — a grayish mass with a whitish earthy crust. "From McDonald Quarry, Brooksville, Hernando Co., Fla. This is from a quarry in the Suwannee limestone of Oligocene age." — on label.

GEORGIA — "Am sending you under separate cover a piece of pyrophyllite from Graves Mountain (Lincoln Co.), Ga. This looked like a very good specimen and I thought you might like to have a piece from this famous location, though you may already have some."—letter dated Jan. 31, 1956, from Bob Daniel, prop. of Natural Gems, 795 E. Currahee St., Toccoa, Ga.

A very nice radiated-fibrous mass, brown in color, was received.

Pyrophyllite is one of the minerals that made Graves Mt. famous as a mineral locality—The locality was described in the May 1939 R & M.

IDAHO—J.L. Blalock, owner of Hells Canyon Agate and Fossil Shop, 213 Sycamore, Clarkston, Wash., sent us two very interesting specimens—gem quality sillimanite. The specimens are 2 inch pebbles, mottled brown, white, and dark gray—one pebble is rough, the other polished. The unique pebbles have been found on a gravel bar in Clearwater River in Nez Perce Co., Idaho.

We hope to print an article on these pebbles—perhaps in this issue. Watch for it!

ILLINOIS—Kenneth Vaughn, 311 E. Central Blvd., Kewanee, Ill., has sent in

a large 4 x 5 Septarium, specimens of which occur abundantly around Kewanee (Henry Co.), Ill. The septarium is gray in color and filled with pale golden-yellow xline calcite; one brassy-yellow xline pyrite also present.

A septarium (plural, septaria) is a roughly spheroidal concretion.

INDIANA—Walter Reeves, R3, Greencastle, Ind., has sent us a section of a quartz geode that is lined with xled, dark brown dolomite. Mr. Reeves found the geode in a road cut (Rt. 60) 2 miles east of Salem, Washington Co., Ind.

IOWA—From Michael Papcun, RR1, Melrose, Iowa, we have an interesting specimen consisting of thin, bronzy-yellow thread-like wires of millerite on dark smoky gray drusy calcite (on gray limestone). The specimen was found at a limestone quarry near Melrose, Monroe Co., Iowa.

KANSAS—Glen E. Kiser, Douglass, Kans., sent us a dark grayish-black nodule whose interior is xline pyrite. He collected the specimen from Coal Hill, on Hwy 96, east of Oswego, Labette Co., Kans.

KENTUCKY—E.P. Hahn, 67 Brookdale Gardens, Bloomfield, N. J., did some collecting in Kentucky last summer. On Red River in Wolfe County, Ky., about 18 miles from Pine Ridge on Route 15, he found dark gray masses of chert (quartz) in gray limestone.

LOUISIANA—Black lignite occurs near Columbia, in Caldwell Parish, La.

MAINE—In her letter, dated Nov. 21, 1955, Mrs. Ralph M. Wentworth, 135 Maine Ave., Portland 5, Me., writes:

"At Byron (Oxford Co.), Me. on the banks of the Swift River, I found an interesting boulder. It is 12x8x4 inches in size and is of mica phyllite with garnets and staurolite xls. On one side it has 2 or 3 raised layers with raised imprints which look like dinosaur tracks."

MARYLAND—Gold was first found in Maryland in the year 1849, near Sandy Springs, Montgomery Co. From the Sawyer gold mine in southern Montgomery Co., we have a specimen of limonitic quartz containing small grains of native gold—donated by John S. Albanese, P. O. Box 221, Union, N.J.

MASSACHUSETTS—Has anyone heard of a natural bridge in Massachusetts? We didn't until Mrs. Ralph M. Wentworth, 135 Maine Ave., Portland 5, Me., called it to our attention. She sent us a specimen from the locality, a white xline limestone.

Marble — Natural Bridge, North Adams, Berkshire Co., Mass.—on label.

She sent us, also, a short article on the natural bridge which may be printed in this issue, if space for it may be found.

MICHIGAN—Tiny, 8-sided black xls of martite occur in a soft, grass-green chlorite at Michigamme, Marquette Co., Mich.

MINNESOTA—Dark, brown cubes of limonite (after pyrite) occur in slates on Ely Island, Lake Vermilion, St. Louis Co., Minn.

MISSISSIPPI—I am sending you a sand sample which I got from the inside of a natural crude iron pipe. This piece of crude iron pipe. (sample enclosed) was given me by a local man and wife who visited their son who is studying geology in a college in Mississippi. This natural iron pipe was found between Starkville and Jackson, Miss. Erosion leaves these pipes sticking up out of the ground and are much sought for by collectors. They are hollow but packed full of sand. The piece I have is brown in color, 9 inches long and about 2 inches in diameter with a wall thickness of about $\frac{1}{4}$ inch. This may not be anything new to you but is rather unique to me.—letter dated Jan. 14, 1956, from Roy M. Fitts, 39 E. Elm St., Yarmouth, Me.

A small piece of the pipe was sent us and it was made up of quartz grains cemented by limonite. A number of sil-

very muscovite flakes were present among the quartz grains. The pipes intrigued us and desiring to obtain more information we contacted a good friend, W. G. Shockley, P. O. Box 631, Vicksburg, Miss. Here is his reply, dated Jan. 27, 1956:

"Thank you for your letter of 20 January 1956. It was good to hear from you again.

"I have not personally seen or heard of the pipes you mention in your letter. However, I called a friend in Jackson and he said that he had been taken to a location where they are found. The specific place where he saw them was about one mile north of Winona, Miss. on a dirt road leading west from Highway 51. He says the pipes are quite numerous and are around 4 to 8 inches in outside diameter and have a hole in them 2 to 4 inches in diameter. Some of these holes are full of sand. Most of the pipes at this location are lying horizontal and he was not sure whether the normal position for the pipes is vertical or not. They occur in a sandy formation and as far as I can tell from a geologic map of the area they are in some member of the Lisbon formation of the Claiborne series of Eocene age. My friend is of the opinion that the iron is a mixture of oxides and hydroxides that has become cemented and cannot truly be called limonite or hematite. He was taken to the site by Dr. R.R. Priddy, who is Professor of Geology at Millsaps College in Jackson, Miss. Dr. Priddy is author of the Mississippi Geological Survey Bulletin on the mineral resources of Montgomery County, in which this formation is located, and I am sure he could give you more information on the occurrence if you would care to write him.

"The town you mention in your letter, Starkville, lies about 60 miles due east of Winona. I would not be at all surprised if these pipes may be found in numerous localities in the region wherever the Lisbon formation is exposed on the surface or in road cuts. However, I have no record of other occurrences."

MISSOURI—Colorless, doubly terminated calcite xls embedded on white xled dolomite, have been found in Carthage, Jasper Co., Mo.

MONTANA—Gerald Navratil, 243 Farragut Parkway, Hastings on Hudson, N.Y., did some collecting in Montana last year, and he sent us a number of items covering minerals found.

Here is one of the items:

"At Hungry Horse Dam, about 15 miles east of Columbia Falls (Flathead Co.), Montana, both above and below the dam in the rock cuts which were made for access roads to and from the dam, are found veins of massive Barite. Some of the veins average about six inches in width and are quite numerous throughout the area.

"Some of the country rock contains manganese dendrites. Also found associated with the Barite are thin veins and veinlets of Calcite. Numerous of these Calcite veins are fluorescent in short wave ultra-violet light. The common color is red grading to delicate pink to a flesh color. Some also fluoresce a cream in color. Practically all specimens collected are phosphorescent."

NEBRASKA—"Recently while rock-hounding in a quarry north of Omaha (Douglas Co.), Nebr., I found a rock which very much resembles a honeycomb. The rock is roughly 3 inches in diameter and in the thickest part is nearly an inch and a half. The complete rock on top and bottom is marked with the odd-shaped cells characteristic of a honeycomb. Even more convincing is the fact that the rock has a small cross section broken off showing complete individual cells all through the inside. The rock is an orange-buff color with the cells clearly marked in a light cream color. On the bottom side of the rock, the imprint of fern leaves is very plain. The rock is very solid and heavy.

"Other collectors and people who have seen the rock think it very unusual and rare. I myself don't know enough to

qualify as an expert but it seems as though a petrified honeycomb would be a rarity.

"The quarry where I found this rock contains approximately 80 feet of shale rock and on top of the shale is a layer of sand and gravel almost 2 feet thick and this in turn is covered with from 10 to 100 feet of dirt.

"I would appreciate any information you could give me on my find.

"Incidentally these hills are full of very fine specimens of what I am told are ammonites"—letter dated Nov. 22, 1955, from Charles M. Schafer, 3129 N. 60th St., Omaha 4, Nebr.

Mr. Schafer, your specimen is not a petrified honeycomb but a petrified coral. If you could send us a specimen of an ammonite, we would be very glad to check it for you.

NEVADA—Pale greenish turquoise has been found in the Sierra Nevada, a few miles north of Columbus, Esmeralda Co., Nev.

NEW HAMPSHIRE—A deposit of pink rhodonite, said to be 7 feet thick, occurs 1 mile southeast of Hinsdale, Cheshire Co., N.H.

NEW JERSEY—"I have found recently pyrite xls ($\frac{1}{4}$ - $\frac{1}{2}$ inch) each one with different faces in limestone at the Lime Crest quarry near Franklin, Sussex Co., N.J."—note dated Dec. 29, 1955, from Raymond Lasmanis, 49 Orchard St., Roslyn Heights, N. Y.

NEW MEXICO—In the Petaca district, Rio Arriba Co., N. Mex., amazon-stone (microcline) occurs that is light greenish-blue and bluish-green often mottled with white.

NEW YORK—The following letter, dated Nov. 15, 1955, comes from Peter Krump, Box 164, Salisbury Center, N.Y.

"I am very happy and proud to own a fine collection of rock and mineral specimens that weigh about four tons. Getting them was no easy task, walking

miles, pounding with a sledge hammer, prying with a crow bar, and then lugging them on my back in a sack. I have found rocks that I did not want to break up, so I would mark the spot, and toboggan them out on snow in the winter. Mineral collecting is my favorite sport and hobby—no heat, rain or snow can stop me when I start out and I usually get what I go after.

"I have spent nights in the back woods, camping over night to get a special hunk of rock and I get it. It is my determination—never give up.

"My section of the country is quite historical—I have dug up many interesting antique articles. There are a number of abandoned mines and quarries, most of which you can drive up to.

"I own several mineral detectors, long and short wave mineral lights, a lapidary outfit, 400 books on geology, mineralogy and mining, and a worn out typewriter. There is nothing more heart warming than to sit in my den among my rocks, maps, and books, for relaxation, no matter how tired I am.



Peter Krump, with one of his finds in Mannheim, N. Y. — a large, gray labradorite. This boulder weighs about 3 tons.

"My advice is that more people, young or old, should collect rocks for relaxing pleasure, education and comfort. They can get to sit among their discoveries and ponder over mother nature's own beauties.

"And for up-to-date information, never be without **ROCKS AND MINERALS**. In this magazine you can find what you want. I have, and am grateful.

"I am always glad to meet other collectors, happy to swap, or to give advice to the best of my ability."

Minerals and Gems, P.O. Box 8072, Albany, N.Y., in their letter dated Nov. 9, 1955, send in another note relative to the locality at Cairo, Greene Co., N.Y. where a huge fossil fern tree was discovered. (See R & M, Nov-Dec. 1955 P. 589).

"Recently we re-visited the stone quarry at Cairo, N.Y., where the fossilized fern tree was discovered. On this occasion we found more time to devote to examining a little more of this large quarry. On examining the walls we discovered a score of fossilized fern tree branches and trunks. These specimens were not examined by the geologist from Cornell College or the naturalist who operates the museum at East Durham, N.Y. When the Gilboa find (fossilized fern tree trunks) were discovered by quarry operations at Gilboa, N.Y. it caused quite a bit of excitement not only at the State Museum, but all over the country. We wonder if this find (in Cairo) will be lost forever with the proceedings of quarry work."

NORTH CAROLINA—An interesting clipping was sent in by Charles Johnson, 307 W. 4th St., Frankfort, Ky. It was taken from the Louisville, Ky., **COURIER-JOURNAL** of Oct. 2, 1955, and titled

"Vacation gem hunting is growing in North Carolina." According to the clip-

ping some of the areas where rubies sapphires, garnets, and emeralds are found are Franklin, Little Switzerland and Spruce Pine—all in western North Carolina.

NORTH DAKOTA—Some kind friend, name unknown, sent us recently an interesting specimen from Mandan, Morton Co., N.D. The specimen consists of a thin, black lignite mass on a bluish-gray slaty rock.

OHIO—Cal. O. Gettings, prop of Toledo Mineral Shop, 1955-2001 Starr Ave., Toledo 5, Ohio, favors us with some more news items. Here they are, dated Nov. 26, 1955:

"Got quite a kick out of the reprint of my last letter in **ROCKS & MINERALS**. I said "As my finds become scarcer so do my letters." The printer made it "As my friends become scarcer." Took quite a bit of kidding about it but guess things like that are apt to happen in the best regulated publications.

"This fall I found that it is a mistake to overlook even the small farmer quarries, i.e. those used only by a farmer for his own use. In one such quarry near Stoney Ridge, Ohio, I found exquisite balls of aragonite xls over $\frac{3}{8}$ " on celestite crystals. What beautiful MM material!

"This summer, while the trips were few and not too far from Toledo, I made a most exciting discovery. Well I was excited being a fluorite specialist. As usual every quarry I find is well hunted for traces of fluorite crystals.

"There are several small quarries near Ottawa, Ohio. Fluorite, calcite and sphalerite may be found if the search is very careful. Small clear white, amber and purple cubes were found. As usual, after getting home and washing and trimming the specimens I looked them over very carefully with the glass. What a surprise! Some of the cubes had queer corners. A stronger glass proved them to be cube trisoctohedrons. I am certain this is a first for Ohio and while it is shown in Dana I have seen them

from only one other locality: Tsumeb S. Africa. I would appreciate if any other collector would inform me if they have seen them in their state. One odd fact is that a group of crystals may show only one trisoctohedron in the whole group. In fact they occur on only about 5% of the crystals.

"This experience is just one more proof of the increased pleasure of specializing on one mineral. To the general collector this would be of little interest. I would highly recommend that every collector specialize on one mineral. By so doing their knowledge is increased many fold and the satisfaction of feeling that on one group of minerals at least they are well informed.

"Another thrill this fall was experienced in looking over a shipment of amethyst crystal groups from Mexico. Nestled in the center of the group was a small cube octohedron of fluorite. You see I look for fluorite everywhere."

OKLAHOMA—From Selman, Harper Co., Okla., we have a number of selenite "roses" (clusters of selenite xls) that vary in color from smoky gray to brown (stained brown by clay).

The selenites were sent in by Mrs. A.H. Huckaby, Box 126, Selman, Okla. Here is her letter, dated Oct. 3, 1955:

"I have lived in Harper Co., Okla., for more than 50 years and have always been interested in rocks, but know very little about them.

"The other day I found some very different from any I have ever seen. They look like a rosette of selenite. Some are in clusters of 12 or more and sometimes there is just one. They are tan colored and some have black edges. They are found growing in brown clay and have quite a bit of clay in them. I am sending you some just as they were found in the bank of a road cut. They break very easy. We have gypsum of all kinds here.

"The selenites are found on our place about $2\frac{1}{2}$ miles north of Selman.

"There is lots of sand around here and when the wind blows hard, the air is full of sand. Buffalo Creek is 1 mile north of Selman and some day I will try to get you a sand sample from it."

Selenite is a variety of gypsum and when found in rosette form are called selenite roses or desert roses.

OREGON—From Baker City, Baker Co., Ore., we have a nice greenish mass of garnierite that was sent us by Roberta Jensen, 8709 S.W. 56th, Portland 19, Ore.

PENNSYLVANIA—"I'm living right on the little Conestoga Creek (Lancaster Co., Penn.), and I've been finding limonite pseudomorph after pyrite. They are dark brown and small ($\frac{1}{8}$ to $\frac{1}{4}$ inch) but nicely formed. I haven't had time yet to track them down and see where they are washed from, but they seem to be fairly common around Lancaster County."—letter dated Aug. 21, 1955, from Richard W. Cox, RD 1, Millersville, Penn.

RHODE ISLAND—At Cranston, Providence Co., R.I. is a deposit of brown limonite that was mined for iron during Revolutionary times.

SOUTH CAROLINA—One mile west of Starr, Anderson Co., S.C., is a large deposit of brown limonite and red hematite—one of the largest iron deposits in the State.

SOUTH DAKOTA—A very nice golden yellow xld calcite on dark gray limestone was sent us by Lee E. Payne, Rt. 1, Willmar, Minn. He had collected it a few years ago. In his letter dated Jan. 16, 1956, Mr. Payne writes: "The locality is probably 35 to 50 miles east of Rapid City (Pennington Co.), S. D., in a rather ordinary road cut on the north side of U.S. Highway 14. To the south the road slopes away so that there is little or no cut there. Attention was arrested by what superficially appeared to be cross sections of several

petrified trees in the otherwise clayey soil of the bank. This appearance was only justified by the hasty glimpse apparent from the moving car. When it was stopped the trunklike cross section vanished though the round outcrops were still there.

"The railroad in this area parallels the highway and near the cut where the calcite was found there is a rather long, though not high, trestle."

TENNESSEE—A beautiful slab of grayish marble, one face polished, and coming from the marble quarries at Knoxville, Knox Co., Tenn., was sent by Miss Juliette Desport, 1229-17th Ave. S., Nashville, Tenn. "Granex Grey Marble"—on label.

TEXAS—From Mrs. Ruby Renfro, 2901 Bomar Ave., Fort Worth 3, Texas, we have received an interesting fossil sponge, a silicified pinkish mass that should take a high polish. The fossil occurs as a reef in limestone at Bridgeport, Wise Co., Texas.

UTAH—Howard V. Hamilton, 1340 Crandall Ave., Salt Lake City 6, Utah, sends in the following item, dated Dec. 3, 1955:

"Nodules of sand cemented with asphalt and pyrite (outer layers of some nodules contain native arsenic, sphalerite and metazeunerite) occur near the Temple Mountain area of the San Rafael Swell, Emery Co., Utah.

VERMONT—Beautiful dark green serpentine marbles (verd-antique marbles) have come from the serpentine quarries at Roxbury, Washington Co., Vt.

VIRGINIA—A dark gray hematite mass (tarnished red, blue in places) and associated with massive smoky quartz, has been donated to us by John S. Albanese, P.O. Box 221, Union, N. J. The locality for the hematite is Pulaski, Pulaski Co., Va.

WASHINGTON — Robert J. Smith, Rt. 2, Box 190, Puyallup, Wash., sends

in this item, in his letter dated Jan. 19, 1956.

"About finding anything of interest here, I recall one case you may be interested in. About 3 years ago I was looking in an old gravel pit about 4 blocks from my home here in Puyallups (Pierce Co.), Wash. I had sat down to rest when I noticed a small green pebble which seemed to contrast with all the rocks around it. I picked it up and put it in my pocket. When I got home I found it to be a small but good specimen of nephrite jade. I know of no other discovery of this mineral right near this city."

WEST VIRGINIA—"I am sending you a specimen that I found near Follansbee, Brooke Co., W. Va. What is it?"—letter dated Jan. 17, 1956, from James Smedley, Box 242, Follansbee, W. Va.

The specimen is a white, compact fibrous aragonite mass on gray sandstone. It is a handsome specimen.

WISCONSIN—A deposit of bronzylite yellow pyrrhotite occurs $2\frac{1}{2}$ miles south-east of Mountain, Oconto Co., Wisc.

WYOMING—A banded purplish mass (different shades) of chalcodony, has been sent us by Lee E. Payne, Rt. 1, Willmar, Minn. The specimen comes from Moss Agate Hill (S. W. of Douglas), in Converse Co., Wyo. In his letter, dated Jan. 23, 1956, Mr. Payne writes:

"The specimen was collected on Moss Agate Hill, Wyo., about 20 miles south of U.S. Highway 87. There is a road about 10 miles west of Douglas which leads south to Moss Agate Hill by way of Ayer's Park and Natural Bridge. The chalcodony was found lying on the surface along the road at the top of the hill. Specimens are available for exchange."

ANDORRA—From Andorra, one of the world's smallest republics, situated between Spain and France, we have a

mineral that was sent us by Juan Montel, Plaza Sgdo, Corazon No. 1, Villafraanca del Panades, Spain.

The specimen consists of tiny brassy — yellow pyrite xl masses in grayish, banded limestone and it was found about 1 kilometer (about 3,000 feet) north of Sant Julia, Andorra.

AUSTRALIA—Roger C. H. Doo, 74 Day St., Rm 2, Drummoyne, Sydney, Australia, has sent us an interesting specimen. It consists of greenish autunite incrustations on pinkish granite and comes from Rum Jungle, N.T., Australia. The autunite fl. green under the Mineralight.

CANADA—Not long ago we received the following letter from Glenn Bagley, 94 First St., Kirkland Lake, Ont., Canada.

"I have been in this gold mining community for a year and a half and have at long last started a hobby of mineral collecting. This new hobby promises to be exciting and absorbing as I travel over most of northern Ontario and have access to many properties.

"In the Bancroft area radio-active specimens can actually be picked up on the highway if one has been shown where with geiger counters.

"In many of the homes up here people use diamond drill cores as carving knife sharpeners. These cores are of various lengths and can be picked up in the dumps of many abandoned mines. The cores are of all shades and kinds of rock."

CEYLON—Fritz G. H. Carlson, 55 Foster St., New Bedford, Mass., has sent us another specimen from the gem pits at Ratnapura, Ceylon. The specimen is a pale blue gemmy sapphire pebble.

COLOMBIA—W. T. P. O'Gara, Dept. Exploration, International Pet. Co., Ltd., Edificio Colombiana De Seguros, Bogota, Colombia, sends in the following item, dated Feb. 12, 1956:



A side aisle in the Cathedral in the salt mine at Zipaquirá, Colombia.

W. T. O'Gara photo

"My work here confines me to the office exclusively and so have not had the opportunity to visit any Colombian mineral localities with one exception. At the town of Zipaquirá, some 25 miles N.W. of Bogotá, there are very interesting salt mines which date back to before the Spanish conquest of Colombia. Large pyrite crystals occur in the salt formation, which seems to be an intrusion into black carbonaceous Villeta shales of Lower Cretaceous age. These pyrite crystals are collected and sold to tourists by small boys who get them from the salt vats where the halite (salt)

is dissolved and refined by a primitive boiling process.

"The pyrite crystals vary from the cubic to modified pyritohedrons, and some good pyritohedrons have been collected.

"A church has been started in the salt mine, in the large vaults, now exhausted of salt, and one can drive up to the Cathedral doors in automobiles through the mine tunnels.

"Emerald crystals occur about 15 miles N.E. of Zipaquirá at a small town called Nemocon, but are not of good gem quality."



The Cathedral in the salt mine at Zipaquirá, Colombia, N. W. of Bogotá.

W. T. O'Gara photo

GERMANY—Peter Th. Arnold, Hansastr. 56, Hamburg, Germany, sent us a lustrous, grayish-black xled pyrrargyrite, associated with tiny colorless calcite xls and tiny lustrous, lead-gray galena xls.

"From Grube Himmelfahrt, Freiberg, Saxony, Germany."—on label.

MEXICO—The following item was received recently from Scott J. Williams, 2346 N. Scottsdale Road, Scottsdale, Ariz.

"A fabulous occurrence of the comparatively rare lead dioxide, plattnerite, has been found in a small amount at the famous old mining district, the Ojuela Mine, Mapimi, Durango, Mexico, which in the past has produced so many magnificent specimens.

"These very brilliant, jet-black tetragonal, needle-like crystals, with adamantine luster, are available in many different combinations: scattered on hemimorphite; solid velvety coatings on matrix; groups of crystals on, and included in, calcite crystals (with or without hemimorphite); and in unusual stalactic growths, effecting spectacular specimens.

"The crystals are small (1 to 2mm), but are so profuse in number that the mineral is clearly visible on each specimen. The specimens are likened to the specularite from Cumberland, England, in their velvet-black appearance.

"A very few have geniculated and penetration twin crystals hitherto unknown on natural material. These may be easily seen with any magnifier."

SCOTLAND — A lustrous cleavable mass of galena has been sent us by Sandy Ramsay, 1015 Aikenhead Road, Kings Park, Glasgow S4, Scotland. The locality for the specimen is Wanlockhead Mine, Dumfriesshire, Scotland.

"Galena from the new shaft being sunk at Wanlockhead, Dumfriesshire, Scotland.

"This place is generally referred to as the Leadhills, as the two places are only about a mile apart. Leadhills is in Lanarkshire."—on label.

SOUTH AFRICA—A brownish-gray xline siderite associated with some massive smoky quartz was sent us by John S. Albanese, P.O. Box 221, Union, N. J.

"Siderite, Bourkes Luck Mines, near Pilgrims Rest, Transvaal, South Africa."—on label.

SPAIN — A greenish, glassy, friable mass of allophane was sent us by Juan Montal, Plaza Sgdo. Corazon 1, Villafraanca del Panades, Spain. The locality is—Sta. Creu Olorde, Barcelona Province, Spain.

VENEZUELA—"About 200 km. east of Puerto La Cruz, near Caripito, Venezuela, is a surface deposit of sulfur. Don't know anything more about it except it is being mined. Hope to get up that way and get myself some good crystals if it's crystallized."—letter dated Sept. 1, 1955, from John R. Adams, c/o Mene Grande Oil Co., Barcelona, Venezuela.

Will always subscribe for R & M!

Editor R&M:

Although I have been collecting for 2 years I am still a novice. The collecting of Rocks and Minerals has fascinated me to the point that when I go out to the country my eyes are always on the ground or checking every bit of outcropping. But most of all your R&M is my main course. To me it's tops and I'll never fail to subscribe to it. Wonderful magazine!

Robert A. Vasquez
20-16 20th Street
Long Island City 5, N. Y.

R & M Editor is congratulated!

Editor R&M:

I am not in the habit of writing editors my sentiment of their publications. I think it only fair that, since you have developed such a fine magazine, I should congratulate you.

I have been for years a regular reader of R&M and consider it one of the most interesting and complete magazines in its field.

Inclosing remittance for renewal. I shall continue to be in your army of faithful supporters.

George Cottrell
656 W. 61st Place
Chicago, Ill.

March 2, 1956



WOMEN'S CORNER OF R&M

Conducted by Winnie Bourne
c/o Rocks and Minerals

Box 29, Peekskill, N. Y.

Well, girls, I knew you would not let me down. No sooner had the Jan-Feb issue got off the press, then letters started pouring in from all sections of the country—from women readers of R & M who were all highly enthused with the Women's Corner.

It is certainly heart-warming to get such a fine response from our women subscribers. Keep the letters pouring in which in time will make our "Women's Corner" that much more interesting to our fair sex and be a department that we all can be proud of—this will make the male sex sit up and take notice of our recognition into the Mineralogical World.

Who knows, maybe in years to come they'll merely accompany us women on our field trips just to carry specimens home that we collected—this we look forward to with eager heart.

"Your column should be interesting and I wish you the best of luck", wrote Olive M. Delaney, 37 Cliff St., Yonkers, N. Y.

From a reader in S.W. Pennsylvania came this letter:

"Your new department in ROCKS AND MINERALS is very interesting. I find stones most relaxing and a healthy sport which women of all ages and walks of life may enjoy.

"There isn't anyone around here interested in minerals but we do belong to a mineral club in Pittsburgh, even though Pittsburgh is a long way to go to meetings.

"We would like to hear from anyone that likes minerals and if some one would like to go on field trips in this part of the country we would be happy to take them."—Mrs. Tres Lawhead, Roulette, Pa.

From Mira Morse, 427 E. Friendship St., Medina, Ohio, we received the following very interesting article "She Who Laughed First" with her letter of March 2, 1956, and it reads as follows:

She Who Laughed First

"In Peter Zodac's book entitled *"How To Collect Minerals"* he has devoted one chapter to "Writing the Mineral Article". He says that in preparing an article it is customary to write in the third person.

"As a rockhound, I am neither modest nor generous. In order to tell you how I happened to become enthused I will have to begin each sentence with 'I'.

"For years my husband has been interested in rocks and minerals. But I could either take them or leave them and more often I left them. Even worse than that, I said some unkind things which I thought were quite humorous such as—that he had rocks in his head.

"The turning point in my life came while we were visiting my uncle in Florida. Someone suggested a trip to Ballast Point near Tampa, Fla., to gather fossil coral. I happened to find the first piece and not being an authority on such subjects, I handed it to my husband and asked, "This couldn't be one, could it?" The negative approach—I should have known better. He answered by saying, 'I don't think so, but I'll test it.' He then proceeded to smash my find to bits. I'll admit the coral looks most unpromising but after we had repeated this performance twice it suddenly became very precious to me. I began gathering the rather smelly bits in a soggy paper sack. The men in the party soon tired and persuaded me to leave.

"Now it could have been the salad I ate that evening that gave me insomnia. But as I lay awake I began to think about a dredge I had seen, from a distance, at the far end of the beach. I could scarcely wait for daylight to tell my husband about my plan.

"In the morning we studied the tides in the Tampa paper and started out. My uncle had decided that one day at the Point was enough for the time being and did not accompany us. I was so excited I forgot to watch the road map and we made several wrong turns.

"When we finally arrived, we raced to the spot I'd had in mind and began scooping up the coral. My hunch paid off. We have since heard that a yacht club was digging a boat basin. It was the best picking we ever hope to have there. We gathered 62 pounds in slightly over an hour.

"My husband then pried me away from the place by saying that we had already gathered far more than we had ever expected to find. He isn't as greedy as I am. My excuse was that I would use it for trading stock. I'll have to admit that I haven't traded any of it and only our very, very best friends have been given a piece. I've fallen in love with every scrap. Call it fossil coral, agatized coral or chalcedony pseudomorph after coral, to me it is beautiful when it is cut and polished. It is also fluorescent.

"I'll sum it all up by saying I haven't been quite the same since that eventful day. I wasn't always a rockhound. I'm a convert and sometimes I think they might be the most ardent kind."

The letter from Mrs. Morse reads:

"I wish you much success in your new venture. I think it would be especially interesting to read about women who are collecting and those who are doing lapidary work. I'd like to hear how the hobby has given husbands and wives a common interest, about the contacts made by joining a local mineral society and about the interesting field trips."

Visiting Rock Hounds Welcomed

The following subscribers would be delighted to have rock hounds call on them when passing through their cities. If any one else wants his name added to the list, just let us know.

Mrs. John A. Talbot, 1221 W. 6th
R.A. Richards, Box 44, Morristown,
Ariz.

Edward Rushton, 730 Bexley Road,
West Lafayette, Ind.

Leroy Leisure, 500 Townsend Ave.,
Brooklyn, Baltimore 25, Md.

Don Alfredo, 322 Linda Vista, Las
Cruces, N. Mex.

Vernon Haskins, East Durham, N.Y.

Peter Krump, Box 164, Salisbury
Center, N. Y.

Donald V. Dalton, Box 68, Chimney
Rock, N. C.

James A. Ray, 12 Caledonia Road,
Asheville, N. C.

Albert Laws Kidwell, Carter Oil Co.,
Research Lab., Tulsa, Okla.

Fred J. Teague, 1612 - 3rd Ave.,
S. W., Hickory, N. C.

David A. Houston 3rd, Box 343,
Terrace, Bethlehem, Penn.

Adolph Hillstead 1309 — 4th St.
Brookings, S. D.

Leroy H. Grossman
211 N. Park Ave.
Batesville. Ind.

Howard V. Hamilton
1340 Crandell Ave.,
Salt Lake City 6, Utah.

Clark P. McLean, Brass Castle Road
RD # 1, Belvidere, N. J.

Mrs. Ammon Schwartzbach
2239 Logan St., Harrisburg, Pa.



THE SAND COLLECTOR

CONDUCTED BY PETER ZODAC
PEEKSKILL, N. Y.

Anhydrite Sand From McIntosh, Ala.

P. R. Cosminsky, 509 Timberlane, Falls Church, Va., sent in a puzzler when he sent in the following "sand":

"This may not qualify as sand, if not, call it a mineral specimen.

"It is a water insoluble residue from brine wells at McIntosh, Washington Co., Ala. Practically all anhydrite with a few dolomite rhombs. This material contained a very few tiny hauerite xls, but these have been removed."—on label.

This is a fine grained gray sand—all colorless grains of anhydrite and dolomite.

Shall we call it sand? Yes. It is not true sand to be sure for it occurs as tiny grains embedded in salt. It was set free when the salt around it was dissolved by water, pumped to the surface and then concentrated. Whether nature or man is responsible, a mass of loose grains or particles of rocks or minerals is called sand.

River Sand From Benson, Ariz.

Geo. C. Barclay, Box 433, Newport News, Va., donated this sample. It is a coarse grained, brownish sand consisting chiefly of quartz (colorless, whitish) and brownish clay. Some black magnetite, silvery muscovite, and greenish epidote also present.

"Sand from San Pedro River at Benson, Cochise Co., Ariz."—on label.

Magnetite Sand From Princeton-by-the-Sea, Calif.

Here is a sand sample that had us puzzled for a while as its locality did

not seem to jibe with the true location. It was sent in by Arthur W. Browne, 623 Palo Alto Ave., Mountain View, Calif., who labelled it as coming from a beach on the Pacific Ocean at Princeton, Calif., about 23 miles south of San Francisco. But Princeton turned out to be inland and about 100 miles north of San Francisco. After some search we discovered that there were two Princetons in California, one about 100 miles north of San Francisco (in Colusa Co.) and the other was Princeton-by-the Sea, in San Mateo Co., about 23 miles south of San Francisco. The sand is from the latter locality which is on the Pacific Ocean.

A letter from Mr. Browne, dated Nov. 10, 1955, clarifies the situation.

"The sand is from a beach in San Mateo County. Princeton (by-the-Sea) has half a dozen stores. It is a fisherman's resort. It lies between Moss Beach and Miramar. Two of my old maps list it. The more modern ones give El Granada at that spot or near it. The joke is that there is one business place at El Granada as against half a dozen at Princeton (by-the-Sea). Traffic signs have (Princeton) But evidently the map makers frowned on the name because of the post office Princeton in Colusa County."

The sample is a fine grained dark gray sand. It consists of lustrous black magnetite, lustrous black ilmenite, quartz (colorless, milky, smoky), green epidote, black biotite, colorless zircon (fl. orange under the Mineralight), and some white sea shells.

Garnet Sand From Cornfield Point, Conn.

Cornfield Point is on Long Island Sound, in Saybrook, Middlesex Co., Conn. From its beach we have a sand sample that was sent us by Donald Grisky, Rt. 1, Old Lyme, Conn.

The sample is a fine grained red sand. It consists chiefly of pink gemmy garnet with colorless to smoky quartz and black lustrous magnetite.

"Beach sand. Cornfield Point, Saybrook Conn, Feb. 3, 1955, 1 mile west of the mouth of the Connecticut River. A beautiful spot looking across Long Island Sound." — on label.

Quartz Sand From Kenansville, Fla.

"I am sending you a couple samples of sand. I picked up this sand 8 years ago when on a trip, a mile or so from Kenansville (Osceola Co.), Fla. There was a ditching machine digging a ditch for laying drainage tile. The sand was yellow and wet, so that evening I put it in a pan on the stove to dry out. As soon as it dried I took some out for my bottle — leaving the rest on the stove which began to turn red — so I left it for awhile, stirring it. When finished it was like the other sample. Would like your opinion for the cause." — letter dated Dec. 21, 1955, from Chas. R. Lamb, Long Beach, Wash.

The first sample was a fine grained, yellow-brown sand consisting entirely of brown quartz. The second sample was a fine grained, red sand consisting entirely of red quartz.

The explanation for the color change is simple. The original color—yellow—brown— was due to the presence of limonite (hydrrous ferric oxide — hydrrous means it contains water). When the sand was heated, the water in the limonite was driven off, leaving ferric oxide (hematite), the color changing to red at the same time. So the red color in the heated sand is due to hematite.

Garnet Sand From Weiser, Idaho

From Weiser, Washington Co., Idaho, we have a sand sample that was sent in by Glen E. Kiser, Douglass, Kans. The sample is a medium grained dark red

sand consisting practically all garnet (red, partly gemmy, some showing crystal faces) with a tiny amount of black magnetite.

Beach Sand From Evanston, Ill.

Evanston, Cook Co., Ill., is on Lake Michigan. From a beach in the city we have a sand sample that was sent us by Miss Juliette Desport, 1229-17th Ave. So., Nashville, Tenn.

The sample is a fine grained, brownish gray sand. It consists chiefly of quartz (colorless brownish, reddish) with brownish to whitish feldspar and a tiny amount of black magnetite.

"Beach sand, Lake Michigan, Evanston, Ill., at Northwestern University, a suburb of Chicago." — on label.

River Sand From Littleton, Iowa

Mrs. Geo. Bergston, 816 Colleen Ave., Evansdale, Waterloo, Iowa, sent in this sample which is a medium grained, brownish sand. It consists of quartz (colorless, brownish, smoky, grayish-blue chalcedony) and pale flesh-colored feldspar.

"Sand from Wapsipinicon River, Littleton, Buchanan Co., Iowa. Many fossil corals of Devonian age here." — on label.

Prairie Sand From Tribune, Kans.

The conductor of this department personally collected this sample. It comes from a sandy area on a prairie on Kansas Hwy. 96, about 5 miles east of Tribune, Greeley Co., Kans. The sample is a dark reddish-gray, coarse grained sand consisting chiefly of quartz (smoky, brownish, reddish, gray chalcedony) with gray clay and some black magnetite.

Gold Sand From Silver City, N. Mex.

Some few months ago we received a sand sample from F. P. Smith, Box 122, Ventura, Calif. It comes from the Silver City district, Grant Co., New Mexico.

The sample is a medium grained, black sand. It consists of lustrous black magnetite, black lustrous ilmenite, smoky quartz, green olivine, yellow gold, and reddish garnet.

River Sand From Stuyvesant, N. Y.

Stuyvesant, Columbia Co., N. Y. is on the east bank of the Hudson River. About 1500 feet south of the R. R. station at Stuyvesant, is a sand beach that is about 300 feet long and 25 feet wide. From this beach the conductor of this department personally collected a sand sample that is medium grained and dark gray in color. The sand consists chiefly of quartz (colorless, smoky, brownish) with whitish feldspar, black biotite, silvery muscovite, and a little black magnetite.

Quartz Sand From Sallisaw, Okla.

From a sand pit, 50 feet deep, on Hwy. 59, south of Sallisaw, Sequoyah Co., Okla., we have two sand samples that were collected for us by Glen E. Kiser, Douglass, Kans. One sample is a medium grained, brown sand — all brown quartz. The other is a medium grained, bright red sand — all red quartz.

Brown Sand From Saulsbury, Tenn.

Miss Juliette Desport, 1229-17th Ave., So., Nashville, Tenn., sent in this sample, which is medium-grained and reddish-brown. The sand consists entirely of reddish-brown quartz.

"Golden Glow Bank Sand, Saulsbury (Hardeman Co.,) Tenn. Sold in Chattanooga." — on label.

Glass Sand From Santa Anna, Texas

This is a light brown, medium grained sand consisting entirely of light brown quartz. It was sent in by Mrs. Ruby Renfro, 2901 Bomar Ave., Fort Worth 3, Texas.

"Glass sand from the quarry in Santa Anna (Coleman Co.), Texas. This sand is shipped all over the world to glass mfg. This is in the Fredericksburg formation. Cretaceous." — on label.

Black Sand From Great Falls Park, Va.

P. R. Cosminsky, 509 Timberlane, Falls Church, Va., donated this sample which is a fine grained, lustrous black sand.

"Black sand from a small wash running into the Potomac River at Great Falls Park, Fairfax Co., Va. Collected in August, 1955.

"Magnetic fraction of sand (about 25% by volume) is lustrous black magnetite, some in good octahedrons.

"Non-magnetic fraction contains lustrous black ilmenite, smoky quartz, reddish garnet, a few tiny dark brown limonite after pyrite cubes, and limonite after magnetite octahedrons, and some green epidote." — on label.

Beach Sand From Home, Wash.

From Mrs. Geo. Bergston, 816 Colleen Ave., Evansdale, Waterloo, Iowa, we obtained this sand which is medium grained and dark gray. The sand consists of quartz (chiefly smoky, some colorless, brownish, reddish; gray chalcedony), some green epidote, a tiny amount of black magnetite, and some white sea shells.

"From Heron Beach on Puget Sound near Home, Pierce Co., Wash." — on label.

Calcite Sand From Glendo, Wyo.

"Found at bottom of waterfall, Garden Creek Falls, Gerhard Jacobsen Ranch, 18 miles N.W. of Glendo, Platte Co., Wyo." — on label of this sand sample that was sent us by John S. Albanese, P.O. Box 221, Union, N. J.

The sample is a medium grained, gray sand. It consists chiefly of colorless calcite; some colorless quartz and bronzy phlogopite also present. Fl. orange (some grains only) under the Mineralight.

Slate Sand From Andorra

Andorra is one of the world's smallest republics. The little country is situated between Spain and France. From the Valira River, and 200 meters (about 600 feet) south of the little town of Encamp, we have a sand sample that was collected for us by Juan Montal, Plaza Sagrado Corazon 1, Villafranca del Panades, Spain.

The sample is a dark gray, coarse sand. It consists chiefly of dark gray slate with minor amounts of mica schist, smoky quartz, and tiny amount of rusty black magnetite.

"Sand, Valira River, 200 meters south of Encamp. Center of river. Collected Aug. 15, 1954"—on label.

Gold Sand From Lytton, B.C., Canada

"Enclosed is a sample of black sand concentrates taken from the Fraser River two miles upstream from the confluence of the Thompson River. There should be several fine flecks of yellow gold among the other colors. Taken from one gold pan at extreme low water. March 12, 1955."—on label of the sand which was sent in by Ron Purvis, Lytton, B. C., Canada.

The sample is a medium to fine grained, black sand. It consists chiefly of lustrous black magnetite and pinkish gemmy garnet. Colorless to smoky quartz, green epidote, colorless zircon that fl. orange, and flakes of yellow gold (about 6 seen) also present. The locality for the sand is about 2 miles north of Lytton.

Beach Sand From Balka Strand, Denmark

Bornholm, the 4th largest island of Denmark, is in the Baltic Sea, 92 miles east of Zealand of Sjaelland (the largest and most important island), and 22 miles from the southern extremity of Sweden. It is 24 miles long and 18 miles wide. From Balka Strand, on the S.E. coast of Bornholm, we have a sand sample that was collected from the beach by Gerhard Koppen, Skanegatan 3, Nybro, Sweden.

The sample is a fine grained, gray sand. It is almost all colorless quartz with small traces of green epidote and red garnet.

Beach Sand From Blackpool, England

"Blackpool is the 'Coney Island of England.' The town is devoted almost exclusively to tourists. Have been there but didn't stay long as the inhabitants have an uncanny knack of parting the visitor from his cash.

"The sand was collected by my friend, John Coulter."—on note with sand from

Sandy Ramsay, 1015 Aikenhead Rd., Kings Park, Glasgow S4, Scotland.

The sample is a fine grained brown sand. It consists chiefly of quartz (colorless, smoky, brownish) with brownish sea shells; a few tiny grains of black magnetite also present.

Blackpool (Lancashire, England) is on the Irish Sea. It is one of the most popular seaside resorts in the British Isles, crowded in summer by myriads of excursionists.

Dolomite Sand From Berchtesgaden, Germany

This is a coarse grained, gray sand consisting entirely of gray dolomite which fl. yellow under long wave light. It was donated by Glen E. Kiser, Douglass, Kans.

"Berchtesgaden, Bavaria, Germany. Hideout of Hitler."—on label.

Olivine Sand From Kau, Hawaii

"My friend, Mr. Campbell, just returned from several months stay in the Hawaiian Islands, and he brought for me a number of sands a sample of one is sent you. This sample comes from Kaulana Bay, Kau, Hawaii Island."—from letter dated Fri. Dec. 9, 1955. sent by Chas. R. Lamb, Long Beach, Wash.

The sample is a fine grained, green sand. It consists chiefly of green, gemmy olivine with small amounts of black magnetite and white to brownish sea shells.

Kaulana Bay indents the east coast of Hawaii Island (the largest island of the Hawaiian group).

Shell Sand From Rosapena, Ireland

"Beach sand from Foreland Point, Rosapena, County Donegal, Ireland. Sand picked up by my friend, John Coulter, whilst on holiday there. Foreland or Bloody Point is the most northerly point on Ireland's N.W. coast (that sounds Irish) and Rosapena a little fishing village much frequented by tourists."—on label with sand sent in by Sandy Ramsay, 1015 Aikenhead Rd., Kings Park, Glasgow S4, Scotland.

This is a medium grained, gray sand consisting entirely of sea shells—all gray color but in a wide variety of forms—slender, round, etc. Fl. green in spots.

Beach Sand From St. Pierre, Martinique

"Sand is from the beach at the town of St. Pierre on the island of Martinique in the French West Indies. It was on this island in 1902 that the great Volcano, Mt. Pelee, exploded killing tens of thousands of people in the city of St. Pierre."—on label with sand that was sent in by David A. Burgess, 268 Roselle St., Memphis 4, Tenn.

The sand is medium grained and dark gray consisting chiefly of dull black magnetite, gray to colorless feldspar, and smoky quartz with minor amounts of black lustrous hornblende and gray lava.

St. Pierre is on the N.W. coast of Martinique.

Olivine Sand From Leala, Samoa

Leala is a small village on the southern coast of Tutuila Island. From its beach we have a sand sample that was sent us by Max Haleck, Pago Pago, Tutuila, Samoa.

The sample is a medium grained, dark brown sand speckled with white. It consists chiefly of olivine (light golden to dark brown and most of it gemmy—many grains show crystal faces, some so sharp that they appear to be faceted). Some white sea shells and a tiny amount of black magnetite also present.

Tutuila (one of the Samoa Islands) is an American possession in the Pacific Ocean.

Glacial Sand From Stonehouse, Scotland

Sandy Ramsay, 1015 Aikenhead Rd., Kings Park, Glasgow S4, Scotland, sent in this sand.

The sand is fine grained and brown in color. It consists of smoky quartz, flesh color feldspar, brown limonite, black magnetite, whitish muscovite, and brown clay. All grains stained brown by clay.

"Glacial sand from a high level terrace. Stonehouse, Lanarkshire, Scotland."—on label.

River Sand From Umtata, So. Africa

From the Umtata River, near Umtata, Cape Province, South Africa, we have a sand sample that was sent us by F.C.M. Bawden, P.O. Box 1167, and Mrs. I.N. Gush, P.O. Box 1128, both of Johannesburg, South Africa.

The sample is a fine grained, brown sand. It consists chiefly of quartz (brownish, colorless) with some pinkish garnet, and a tiny amount of black magnetite.

Shell Sand From Balearic Islands, Spain

The Balearic Islands consist of two groups, the Balearic Islands proper (the largest islands), and a group of small islands known as the Isles of Pines of which Ibiza is the largest. Near Ibiza is a very small island (Espalmador).

From the beach on Espalmador Island we have a sand sample that was sent us by Chas. R. Lamb, Long Beach, Wash. The sample is a medium grained, gray sand consisting chiefly of sea shells (gray, white, brown, pink—some tiny perfect shells also present) with some gray, also red, coral.

The Balearic Islands lie in the Mediterranean Sea, east of Spain to which country they belong.

Attention Sand Collectors

We appreciate your warm interest in the sand department and are deeply grateful for the many sand samples sent in. Quite a number of the samples received, however, are of little value because no information regarding their occurrence was sent in. If a sample comes from a stream, pit, road cut or other place, please tell us about it and give name of stream or pit if this is known and tell us also near what town and in what county and state the sand comes from. The more information sent us the more interesting is the sand samples.

Editor R&M:

THE GEM COLLECTOR

Conducted by Bill Cole
408 Dickinson, Chillicothe, Mo.

THE EMERALD

When a mineral collector hears Beryl mentioned he generally thinks of the great crystals of this mineral that are found in the pegmatite quarries of the world. But let a gem lover hear the word and he starts dreaming of the fine grass-green crystals of Emerald found in Colombia and the Ural Mountains.

The Emerald is one of the Beryl family and one of the most precious of stones. Beryl itself is a very durable mineral having a hardness of $7\frac{1}{2}$ to 8 on the scale of hardness. The Emerald is slightly softer than the other varieties. The S.G. of Beryl is 2.70 and the refractive index 1.575 varying slightly. The mineral Beryl, is composed of Beryllium Aluminum Silicate $\text{Be}_3\text{Al}_2(\text{SiO}_3)_6$ and so is mined for the metal Beryllium, which is the lightest of all the rigid metals. It can be machined easily and therefore used extensively in light weight, high strength alloys. It is also one of the elements which play an important role in atomic energy and its research. Beryl occurs quite plentifully in pegmatite and metamorphic rocks; but only a very small percentage is of gem quality.

Besides the Emerald there are other varieties of gem Beryl such as Morganite, the pink variety, Heliodor, the golden yellow variety, and Aquamarine, the sky blue or sea green color. The chief source of Morganite and Heliodor is Africa. Aquamarine is usually associated with Brazil where flawless crystals have been found weighing many pounds. It's hard to imagine faceting material by the pound.

But now to get back to the Emerald. Its chief source is Colombia, South America, in the area around Muzo. This area has produced some of the most magnificent gems the world has ever known. For Colombia Emeralds are unrivaled for their rich grass-green color, a green, hard to describe. Here the Emeralds are freed from their matrix of black limestone and calcite by miners who work on levels or steps, which are cut into the side of a

hill. Each worker stands on one level and shovels the refuse from the face of the workings down to the next level where the process is repeated as many times as there are steps to the mine. Tunneling into the Emerald-bearing strata is often prohibitive as the limestone crumbles easily which results in frequent cave-ins.

Another well known locality for Emerald is the Ural Mountains of Russia, where fine green stones are found, and even though they are of a slightly paler color they still make fine gems. The Ural mountains also produce Alexandrite another variety of Beryl or rather Chrysoberyl. The Alexandrite is a very rare gem having the property of changing from bluish-green to raspberry-red when taken from natural daylight into artificial light. It was named after Alexander of Russia during whose reign the mineral was discovered, and it became the national gem of Russia as it possessed the same colors as the nation's flag, red and green.

The Emerald has a long and glorious history for it was one of the favorite gems of the ancients. The Romans used it for engraving into seals and cameos. And the great Pliny described it as a stone that neither sunshine, shade, nor artificial light could change its appearance. This was due to the fact that Emerald unlike many green stones retains its purity of color in any light.

During the reign of Cleopatra there were many mines along the Red Sea which were producing fine Emeralds, and even today a few stones are found at these old localities. During this time it was believed that an Emerald or any stone for that matter ripened like fruit, and the longer it was buried the richer the color became, and so many times when a miner found a rather pale stone he promptly covered it back up thinking it would ripen and become a more desirable color if he just left it where it was.

It is said that the emperor Nero used a lens made of Emerald to view the Gladi-

ators in the arena, now it is hard to believe an Emerald being perfect enough to make a lens from. However during this time when the Emerald was so popular in Rome the Alexandrians were very skilled at the production of fake stones made of green glass, and so it may very well be that these green imitations were the large and perfect Emeralds mentioned in Roman history.

Another tale of woe to a gem lover's heart is the one told in the story of the conquest of Peru by the Spaniards. It seems that the natives who became angry at the plundering of the Spanish soldiers decided that they would rather have their precious gems destroyed than let the Spaniards steal them. They told the soldiers that only a true Emerald would resist the blow of a hammer and not break. So when one of the invaders stole a green stone from a temple or from one of the Indians, he politely took a hammer and whacked it, and naturally it broke into a thousand pieces. It was in this manner that many of the great Emeralds described by the early Spanish explorers were inevitably destroyed.

There are but few really spectacular Emeralds preserved in the museums and treasuries of the world today, some of which are the ones in the Diamond Treasury of Moscow one of them weighing over 135 carats. Other exceptionally large ones are three Colombian stones weighing 156, 65, and 24 carats respectively; these gems are cab cut as faceted stones of this size would be very rare indeed.

So considering the Emerald's beauty and rarity it's easy to see why it has fascinated men and held such a high place in the world of gems for so long, and will continue to do so as long as there are those who appreciate the beauty that God has placed in all gems for man to enjoy.

If you don't have an Emerald in your collection, write your favorite dealer and see what he has, for many times cab or specimen grade stones can be had very reasonably priced. However don't expect too much for even small stones of fine grade are very expensive, but every gem collection should have at least one representative of this elusive little gem.

A Collector's Friends

Editor, R & M.:

Ever since the Novice column appeared I have made it a practice to contact one or two names appearing each month and through this medium have made some wonderful friends and would be pleased to have my name appear in the new Collector's column and will be glad to exchange information, ideas, news and even offer to swap minerals and "skin them just like one rockhound does another."

Then of course, I want my name to appear inviting touring rockhounds to stop at our place and give our latch string (it hangs on the outside) a vigorous yank and let me show my large mineral collection. Being a man of leisure (a retired Post Office clerk) I shall be happy to act as a guide to some of our nearby mineral localities, such as the Columbia River, Eureka Flat for Agate and Minnick Hill for Spherosiderite and point out other good Washington localities. No obligation, and if they will let us know ahead of the time of arrival we will lay in a supply of fatted calf.

G. W. Weber,
1320 Portland Ave.
Walla Walla, Wash.

GUY E. HAZEN

(Obituary Notice)

Guy E. Hazen, long time rockhound and for many years proprietor of Hazen's Fossil Museum at Kingman, Arizona, died on the night of Jan. 3, 1956. Mr. Hazen was born at Norfolk, Nebr., on Feb. 2, 1895, and was a veteran of World War I. He is survived by two sisters. Few men had a wider acquaintance among lovers of the Earth Sciences and Guy, as thousands called him, will be missed by all of his many friends.

Ralph W. Dietz,
106 B. Bard,
China Lake, Calif.

World's deepest borehole in Louisiana

A wild cat oil well drilled in the Mississippi delta marshland 40 miles southeast of New Orleans, La., set a new world record on Nov. 9, 1955, for a depth of borehole at well over four miles.

The well, drilling in the vicinity of Lake Washington field by Freeport Sulphur Co. and two independent producers, passed the previous world record of 21,482 feet set in California in 1953.

The wildcat, in a remote area accessible only by boat or plane, had been drilling for 255 days and cost about \$1,500,000.

THE AMATEUR LAPIDARY

Conducted by Captain George W. Owens

384th Bombardment Wing, Little Rock Air Force Base, Arkansas

Amateur and professional lapidaries are cordially invited to submit contributions and so make this department of interest to all

RECUTTING OLD STONES

The treatment of "old" stones is a subject that has been seldom mentioned in most books dealing with the Art of the Lapidist, however, most people who do faceting have at some time or another considered re-cutting Aunt Nelly's or Cousin's Joe's ring stone and have probably given up the attempt before it was started—for a number of reasons—the main ones being, no doubt, the difficulty of removing the stone from the mount without undue damage to either, getting the stone back in the mount after the job was completed, and wondering how to explain what happened if something went wrong!

It isn't advocated that any of these reasons be lightly tossed aside—but do not give up before you start. It is suggested that some practice be obtained in removing gems from the mount by trying on one of your own old rings—everyone has at least one.

To successfully remove a stone the use of a thin blade knife or a thin Graver is recommended. Forcing the edge of the blade under the leading edge of the prong or claw and exerting gentle pressure will cause the claw to bend open.

By working slowly and bending each claw a little at a time one can easily work the stone free of the mount. It is not necessary to completely straighten each claw as the stone will come free when the claws are about 2/3 straight.

Recutting is accomplished in the same manner as cutting a preform with the difference being that (in most cases) the angles have been determined for you by the original cutter and that the diameter of the gem may not be radically changed if the gem is to be returned to the same mounting. If a deep

"nick" or scratch must be removed it is recommended that that facet be the first cut as the deepest scratch determines the depth to which all facets must be cut to remain uniform.

With care, a beautiful gem can result from a seemingly lifeless stone by recutting.

Re-mounting is a fairly simple task as the mount has already been prepared for your stone. After the mount has been thoroughly cleaned, a solution of 1 oz. household Ammonia and 1/4 to 1/2 teaspoon of any liquid soap in a half cup of warm water will clean the dirt and grease from a mount in a short time—reset the stone in the mount and gently close the claws down on it. By closing any one claw first then closing the claw opposite to it the stone will assume its proper seat in the mount. After all claws have been closed — go over each again exerting more pressure to be sure that each is firmly in contact with the stone.

A regular "pusher" is used to bend the claws back over the stone. A good substitute may be made by driving a six penny nail into a block of wood and then sawing off the nail head and filing out the saw marks. The wood block should fit comfortably into the palm of the hand. The ring may be either held in the fingers or in a wooden hand-vice while the remounting work is in progress.

After the stone has been resealed, polish the mount by using a small amount of red rouge and a cloth, or use your own favorite polish. The results will be most satisfactory and pleasing.

Recutting can introduce some problems not found in normal faceting such

as:

Recently the occasion arose where it was required that several foreign faceted blue sapphires be repolished. These stones had never been mounted so there were no nicks or chips visible. This was the author's first attempt to recut and polish sapphire, however he had faceted several dozens of sapphires from rough material and anticipated no difficulty. In fact, he thought that since the stones were already cut, that the job would be completed with a minimum of time and effort. Alas! How little he really knew! His recutting plans had been made on the assumption that the stones were cut to accepted proportions when actually they were from ten to twenty degrees off on each facet, including the mains. These stones, ten in number, had the tables "tilted" and two also had the tables "slewed" to one side. All in all, a very poor job of professional faceting.

To facilitate the repolishing the ten stones were separated into two lots. All stones were in Emerald cut shape.

Lot one, consisting of six stones, had tables out of line, only two sides facets instead of three and the girdle was thick on one side, thin on the other. The average weight per stone prior to the work was 1.73 carats.

Lot two, the remaining stones, was much better, needing only repolishing of the tables and existing facets. Average weight was 1.52 carats.

Lot one was dropped and the job started. The first stone had an uneven girdle and a "slewed" table. The table was recut to 90° from 87° and repolished. The cutting of all stones was accomplished on a bronze lap impregnated with 600 grit diamond bort while the polishing was with 6400 diamond on MDR's #25 lap. Polishing is fast, with low heat, and a good high polish is obtained using plain water as a coolant.

After the table was completed the angle for the main facet was set at 40° . A trial cut made and grossly adjusted so as to more nearly correspond

with the original angle and to remove as little of the weight of the stones as possible while retaining the original girdle size. 29° for the mains was necessary to accomplish this, with the *star* facet at 26° and the *Girdle* facets at 33° . Now these figures are far from the recommended angles for sapphire but the stone, when removed from the dop, was fairly "lively". The others in this lot presented practically the same cutting problems. Due to the necessity of holding the original girdle size to eliminate recutting the Pav's, which were satisfactory, the crown angles used were much below the recommended angles, yet most of the stones turned out fairly nice. The weight loss on the stones dropped the average weight of lot one to 1.66 carat. Lot two was repolished only — no cutting being necessary so the weight loss was very small—under $3/100$ th of a carat average. However, one interesting fact was noted, in repolishing without recutting it was very difficult to determine the exact angle of the "old" facet. By pressing the stone firmly against the lap, with the motor OFF, and manually moving the facet arm across the lap a streak was made on the lap. When this streak was "flat" and even in width, the correct angle had been obtained. On these foreign cut stones this angle was often a fraction, such as $26 \frac{2}{3}$ degree, etc. NOTE: Care should be exercised in moving the facet head across the lap until the approximate correct angle is obtained, otherwise, if the stone is at an acute angle, the lap may be deeply scored and damaged.

Results: Ten sapphires repolished. A minimum loss of weight was achieved with a time for the job just double that of the estimate.

Of the ten stones, six are good with four being from barely acceptable to fair—due to internal flaws and angles of the crown facets.

Conclusions: Had the stones been property of the author the weight and size would not have been so critical and the Pav's would also have been recut

so that the stone would have had a better proportion and brilliance.

In recutting improperly cut old stones, a minimum weight loss can be achieved only at the expense of good proportion and brilliance. It would be better to estimate a weight loss of from 20 to 50% and recut both Pav and Crown to accepted angles.

A stone cut to angles that result in the highest possible brilliance should be preferred over one cut for maximum weight and usually commands a better price per carat if done commercially—such as a stone certainly "shows" better in anyone's collection and definitely causes more comment than one cut for weight alone.

However, if the stone being recut has been removed from a mounting and it is intended to replace the stone in the same mount—then caution is advised to be certain that the existing diameter of the stone at the girdle is not changed. Making too heavy a cut of the girdle angles could result in a thin girdle that would chip and fracture when being remounted while an extra heavy cut of this angle would probably result in the diameter of the stone being smaller so that the stone would no longer fit the original mount.

Time of recutting is approximately the same as for cutting a stone from a good preform.

To buy old stones for recutting is probably better than buying preforms

provided the price per carat is reasonable—remember that weight loss will be greater than in a good preform if the stone is not to modern angles and cuts. The existing polish of the stone should allow complete internal inspection for flaws, something not always possible in "store-bought" preforms, even when dipped in a refractive liquid. The author was fortunate in recently obtaining several packets of old stones from a foreign source. These packets contained chrysoberyls, spinels, sapphires, tourmaline and other gems. Several excellent stones have been cut to date and a considerable number of the remaining stones show definite promise.

At one time several sources advertised old stones for recutting purposes, however, no such advertisements have been noted in recent issues of R & M.

Anyone having information where such stones may be obtained at reasonable prices are requested to notify the author and he will endeavor to pass the information on to those who inquire. Surely with all the old rings and other jewelry being constantly accumulated there must be a source other than the family heirlooms, from which amateur cutters may obtain stones at reasonable rates for recutting purposes.

It is always a pleasure to successfully re-cut a stone, re-new or improve its original beauty, to have the satisfaction of a job well done.

In this manner several of the author's most beautiful gems have been obtained.

LOOKING BACK 25 YEARS AGO

IN ROCKS AND MINERALS

March 1931

The pegmatites near Gilsum, N. H., by David Modell, pp. 18-22. Within a 10 mile radius of the village of Gilsum are a number of pegmatite quarries of interest to mineral collectors.

A mineralogical occurrence of iron tannate, by J. D. Laudermilk, pp. 24-25. A dense bluish stain on rock is a natural occurrence of iron tannate.

The old Friedensville zinc mines, by Eugene W. Blank, pp. 26-27. A short

description of this old mine.

Devil's Den, Newbury, Mass., by Elizabeth A. Daniels, pp. 28-29. A gigantic rock formation is Devil's Den.

The Gem Department, conducted by Gilbert Hart, pp. 32-33. Gem varieties of tourmaline were featured.

A complication of gem names, by Gilbert Hart, pp. 36-37. A continuation of the longest list of gem names ever printed.



FOSSIL DEPARTMENT

Conducted by Howard V. Hamilton

1340 Crandall Avenue

Salt Lake City 6, Utah



COLLECTING FOSSILS IN BROWN COUNTY, TEXAS

By T. R. Havins

Box 25, Brownwood, Texas

The western two-thirds of Brown County, Texas, in which the city of Brownwood is located, is in the Pennsylvanian of the Mid-continent area.

About 800 feet of rocks of this age are exposed in this county as sandstones, limestone and shales. The greater portion of the exposed strata are in the Canyon and Cisco series. These are highly fossiliferous. This is specially true of such members as the Brownwood shale, Wayland shale and the Harpersville shale.

One of the easiest fossils to collect in this section is the fusulines. Many of the limestone lentils are little more than coquinas of these protozoa. One never knows, when in the field at what moment he will find them. I always check every ant hill for them. The species in most cases belong to *Triticites irregularis*, *Triticites moorei*, *Triticites bedei* and *Triticites plummeri*. I have not found any true *Schwagerina* in the Pennsylvanians - - some claim they have.

Bryozoa, corals (including *Chaetetes* as large as a bushel), pelecypods (fewest of any form found), cephalopods (in-

half a dozen ammonoid forms), gastropods and brachiopods make up the various forms. The brachiopods seem to be the most abundant in some of the Harpersville members. For example I collected seven species from a space about twenty feet square in a shale bed one-half mile east of Grosvenor one afternoon. Among those collected were 463 specimens of *Composita subtilita*.

Many of the brachiopods are huge. I have one specimen of *P. cora* that measure three inches long on the pedicle side and one and three-quarters inches high. The most beautiful one is *spirifer came-ratus* which can be collected from the Wayland shale member north of the 36th Division State Park.

Incidentally, all lands in the county are privately owned and one must secure permission to collect. This is a cattle ranching section and cattlemen are suspicious. Thieves haul their stock away in trucks and hunters sometimes shoot cattle. If a stranger will explain his desire and ask for permission, he will seldom be refused.

Fossil Seed Pods in Pennsylvania

By Howard V. Hamilton

Among the fine exhibits in the Carnegie Museum in Pittsburgh, Pennsylvania, is a reconstruction of a typical scene from a coal-forming swamp of the Pennsylvanian age. One small part of this exhibit shows reproduction of seed pods called *Trigonocarpus*—believed to have grown on the large fern *Neuropteris*.

An occurrence of this type of seed from Beaver County, Pennsylvania, was report-

ed in 1855 by Dr. Alfred T. King (1). The following description is quoted from his report: "Mr. Mendenhall, of New Brighton showed me several specimens of

1—Description of fossil fruit found in the Carboniferous Rocks of Beaver County, Pennsylvania, by Alfred T. King, M.D. of Greensburg, Pennsylvania. Proceedings of the Academy of Natural Sciences of Philadelphia, Vol. VII, 1854—1855, p. 66.

fossil fruit embedded in solid sandstone, belonging to the Carboniferous series of that neighborhood, and through the kindness of George W. Tyler, Esq., editor of the Boston Herald, I procured a specimen for description.

These specimens bore considerable resemblance, both in form and size, to the fruit of the Butternut, *Juglans cinerea*. There have been found in the coal strata in Leicestershire, England, a number of species of a three-cornered fruit, to which the generic name *Trigonocarpum* has been given. Possibly the specimen which I am about to describe, may be referred to that genus.

This is a drupaceous fruit, of an ovoidal shape from two inches and a quarter to three inches in length, and from one inch and three-quarters to two inches and a half in breadth, and weighs from two and a quarter to three ounces. Its external surface is nearly covered with a thin coating of bituminous coal; a large portion of which however, adheres to its matrix. This coal was formed, I presume, by the carbonization of its pericarp. Its interior is filled with coarse grained sand, similar to the rock in which it was embedded. The epicarp is formed of three nearly equal valves, joined by three prominent sutures, uniting in a point at the apex. Between the sutures are seen a number of parallel and prominent longitudinal striae, which gracefully curve so as to meet in a point at the distal extremity.

In all the specimens which I saw, there is a deep depression or excavation at the base, where the fruit was attached, in all probability, to a peduncle.

This fruit is not triquetrous, as the name *Trigonocarpum* seems to indicate, but strictly ovoidal, sometimes nearly obovoidal, having three prominent sutures joining the three valves of the epicarp.

It was found in Beaver County, Pennsylvania, about three miles from the town of New Brighton, in thick stratum of compact, but coarse grained sandstone near the middle of the Carboniferous series.

Should this belong to the genus *Trigonocarpum*, I propose calling it "*Trigonocarpum carbonarium*."

Somewhat over a year ago, Mr. Paul Papovich, 124 Lincoln Ave., Leechburg, Pennsylvania, and the writer collected some seed pods of this nature in an abandoned sandstone quarry, $\frac{1}{2}$ mile northwest of Crooked Creek Dam, Armstrong County, Pennsylvania. The formation is possibly the Freeport sandstone and is most certainly in the Conemaugh series of Pennsylvanian Age. The seeds were preserved as sandstone casts with a thin layer of carbonized matter between the fossil and the sandstone matrix. There were three prominent sutures as on the fruit described by Dr. King, however the parallel striae that he mentioned were not present. One rare specimen showed the outer husk preserved as carbonized material along with the internal cast. Numerous other pieces of carbonized plant remains were present in the coarse grained gray sandstone. Specimens of calamites and unidentified leaves were noted. A fine specimen of a fern trunk compression showing a frond scar of the type *Caulopteis* was collected at the same locality by the writer. Similar specimens of *Trigonocarpum* have been seen by the writer from near *Millstone*, Elk County, Pennsylvania.

Will visit Michigan!

I am considering a trip to northern Michigan in July so would be interested in contacting some one in that locality to act as guide.

William N. Secrist
195 Lehigh Ave.,
Rochester, N. Y.

April 4, 1956.

Where can I get it!

Editor R&M:

Could you advise me of a reliable source where I might purchase a fine quality of Colombian emerald gem crystals?

J. H. Allen
P. O. Box 454
Mineral Wells, Texas

April 4, 1956.

Club and Society Notes

Attention Secretaries—Please submit neat copies. Give dates and places of meetings. Check names for correct spelling.

East

Eastern Federation Convention — 1956

The Sixth Annual Convention of the Eastern Federation of Mineralogical and Lapidary Societies will be held in Baltimore, Md., on Thursday, Friday and Saturday, September 27, 28 and 29th, with post-convention field trips on Sunday, September 30, 1956. The Gem Cutters Guild of Baltimore will be the host society, of which Edward A. Geisler is president. James W. Anderson is President Emeritus.

Mrs. Elsie Kane White, Exec. Vice President of the Eastern Federation, 3418 Flannery Lane, Baltimore 7, Md., is General Chairman, and announces the show will be held in the main ballroom of the Emerson Hotel in the heart of Baltimore. A full program of lecture and talks on the earth sciences is being arranged, and special attractions to interest everyone. There will be commercial booths, competitive club and individual member displays, and non-competitive feature exhibits and collections. Door prizes are being arranged for the general public, and souvenirs for attending members. A banquet is being planned and an all out effort is being made by the Convention Committee to make the most outstanding convention to date.

Mrs. Elsie Kane White, Gen. Chairman,
3418 Flannery Lane
Baltimore 7, Md.

Mineralogical Society of Pennsylvania Excursion, December, 1955

The December Excursion of the M. S. P. was held Sunday the 18th, destination Princeton University, (2 to 5 p.m.) About 150 persons were able to avail themselves of the opportunity to "get behind the scenes" of a great department of a great university, under guidance of three American Scientists, Dr. Harry H. Hess, Dr. Edward Sampson, and Dr. A. F. Buddington; patient, hospitable and most agreeable hosts. They explained in detail all about the various machines and other equipment used in teaching, also many mineral and rock specimens and their alteration products. Mrs. Sadlon constantly entertained interested groups, in her laboratory for grinding and polishing thin slides, of a number of rock and mineral species. The museum contained a vast collection of mineralogical, geological and paleontological specimens. Viewing the many choice representations of mineral species gave much pleasure to the majority of our group.

One outstanding example was a pyromorphite, from Broken Hill, South Africa, approximately 10 x 7 x 6 inches, of large gleaming, typical green crystals, most beautiful. A whole case of exceptional variscites, with associated species, collected by Dr. Arthur Montgomery, was seldom without its circle of admirers. Another fascinating exhibit was in the fossil department, a group of splendid fossils of fish etc. which strangely were found right on the campus of the University, in an underlying strata of the Newark Series where many tons of the fish-bearing strata were obtained. When the building of the new library was being started, (on the site of the old School of Science Building, constructed in 1873 and destroyed by fire in 1928); it was found that some of the piling came within two inches of the fossiliferous strata. It is a most curious circumstance that where geologists, had worked and students had studied for many years, was right atop one of the best localities for fossil fish in the world. Quite a large volume could be written concerning the many interesting things we saw and the impressive data told us by our kind, genial hosts. One outstanding event should be referred to however, that is about the late famous Dr. Alexander H. Phillips, who separated the first radium in the United States, from carnotite and which is said to be still "hot". To be informed of this fact, in the very laboratory where this far-reaching achievement was accomplished, certainly produced a breath-taking thrill. Dr. Phillips graduated from Princeton in 1887 and continued his studies, while teaching at the University and was an official member of the staff for 49 years following his graduation. Among his many other activities was that of Mayor of Princeton for five years and one of a small group; the founders of the Mineralogical Society of America; of which Dr. Harry H. Hess is now president. (For many other interesting details on the life and works of Dr. Phillips, see the excellent memorial by Dr. A. F. Buddington, *AMERICAN MINERALOGIST*, Volume 22, 1937).

We are sorry for our members who were unable to partake of this stimulating occasion and the contact with our generous hosts who have attained such distinctive prominence in the Science of Mineralogy etc., and to whom we are deeply grateful.

Excursion—January 1956

The first M.S.P. excursion of 1956, was held Sunday the 8th. In spite of the low temperature and sharp chilling winds, the radio weather forecaster's predictions of a possible

sleet storm, with dangerous driving conditions, before evening; 47 persons accepted the invitation of Dr. and Mrs. Douglas Davidson to assemble at their delightful home at Claymont, Delaware. The main purpose was for the showing of colored slides taken during the past year, on mostly our Society trips. Our host, Dr. Davidson, is a very discriminating, successful and prolific photographer and a surprising number of other members, including Charles Belz, Florence and Harold Evans and Paul Seel supplied numerous outstanding examples. Needless to say the showing was filled with thrills of pleasure as slide after slide of picturesque quarry scenes and pleasant incidents revived recollections of happy hours, now M. S. P. history.

A comfortable and commodious lodge meeting room, across the road from the Davidson residence, provided an ideal place for this entertainment. To see the home with its many beautiful paintings and antique objects of art, more than compensated us for the risky trip. Also, what made a deep appeal to most of us, was the ideal work room, fully and neatly equipped for cutting and polishing specimens, a cosy place of inspiration for Mrs. Davidson's hobby of jewelry making and other artistic activities. The serving of wholesome refreshments that followed made every one doubly happy debtors to our amiable and generous host. The desire to get started homeward before sunset, was like many other good intentions of the New Year, forgotten and completely ignored by the majority.

Harry W. Trudell
Chairman, Publicity Committee
1309 Highland Ave.
Abington, Pa.

Westchester Mineral and Gem Society

The Westchester Mineral and Gem Society Inc., participated in the Sportsmen Show held December 2, 3, and 4 in the County Center in White Plains. Mr. David Seaman showed part of his personal Mineral collection from many parts of the world. Mr. Ernest Weidhaas displayed specimens of tourmaline, agate, and topaz. The specimens shown by Mr. Waller Morgan were from Westchester County, while Mr. Ted Schoen's were uranium rocks and petrified wood.

Mrs. Peggy Nielson showed some of her jewelry and also set up a display of stones in their rough and polished states. Considerable interest was aroused by these exhibits.

On December 8, 1955, at a regular meeting a new slate of officers were elected.

President, Mrs. Mayzette Golan
Vice-president, Mrs. Peg Nielsen
Recording Sec-Treas., Mrs. Wilma Kopp
Corr. Secretary, Mrs. Edith Watts
Regular meetings are held at the County Center in White Plains, N. Y., on the third

Thursday of every month.

Wilma Kopp, Sec.
61 Hillcrest Avenue
New Rochelle, N. Y.

New York Mineralogical Club, Inc.

The regular monthly meeting was held on January 18, 1956, in Schermerhorn Hall, Columbia University, New York City. About 95 members and visitors were present.

Mr. Curt Segeler, President, presided; called for order at eight P.M.

The Secretary read the minutes of the December meeting, which were accepted as read.

Mr. Daniel L. Bell, Mr. Bevan M. French, Mrs. Helen M. Platte; were elected members.

Mr. Hayden, Treasurer, reported that dues were due.

Mr. Yedlin reported on publications available, namely: The Calcites of New York, Memoir #13, price \$1.00, obtainable from N. Y. Education Dept., State Museum, Albany, N. Y.

Also: Mineral Collection of the N. Y. State Museum, Bulletin #58, obtainable from the same source.

Mr. Seaman reported on a book on Caves.

Mr. Stromwasser reported on a tentative schedule for field trips for the year as follows: February: to Bound Brook, N. J.

March: to Ellenville, N. Y.

April: to Tollgate and Slocum, Conn.

May: to New Street Quarry, Paterson, N. J.

June: A Two Day Trip to Chester, Vermont, So Acworth, N.H., and to Davis Mine at Rowe, Mass. September: A Two Day Trip to French Creek and Cornwall, Penn.

October: to Herkimer, Middleville, and Fonda, New York.

November: to Trumbull, Conn.

Color slides were shown by Mr. Rothstein to familiarize the members with the Kinkel quarry. On display was a large and superbly beautiful rough Mexican Opal specimen pride of the owner, Dr. Pough.

Mr. Pribil displayed faceted Amblygonite gems and polished Burnite cabachons.

Prof. O'Connell announced that Lapidary Courses 1 to 3, also gem setting and jewelry making, would start on February 6, at Shepard Hall, City College.

Recess was held at 8:30, the meeting was resumed at 8:40.

Mr. Segeler introduced the visiting members of the New York Enthusiasts Club, and extended a warm welcome to them.

Mr. Segeler then introduced the speaker, Dr. Kemble Widmer, Geologist of the State of New Jersey, who spoke on the Geology of New Jersey. The Question and answer period was well participated. Dr. Widmer received a standing vote of thanks.

The meeting was adjourned at 9:40 P. M.

New York Mineralogical Club Field Trip, January, 1956

The January, 1956, Field Trip of the NYMC was taken on Sunday, January 22, 1956, to the Kinkel Quarry, Bedford, Westchester County, New York.

Altho Joe Rothstein of the Field Trip Committee attended for the visit, he was unable to attend due to urgent business in Baltimore.

Joe Stromwasser did a fine job substituting for Joe Rothstein. The Committee picked a beautiful, sunny and crisp day. Plenty of Rose Quartz was promised. About 40 members and guests showed up among them John S. Albanese, of Union N. J., and an old timer from Connecticut who had plenty of Rhodonite to sell but no buyers!

Some of the beginners had a field day at the dump, picking up some fine specimens of pink feldspar crystals in matrices of smoky quartz.

Before the search began for Rose Quartz, the gang watched several of the neighborhood kids on bicycles cavorting around on the ice pond with spills aplenty!

A direct, rugged route was taken by Joe Stromwasser over the protests of some of the "old men". Everyone made it safely. Considerable Rose Quartz was hacked out and there was plenty for everybody.

Joe and three others decided to do some climbing looking for minerals that he did not mention. One of the quartet decided it was too risky so he came down and proceeded by another route, got stuck so that he neither could come down or go up! He was hauled up by a rope to Joe's party.

All finally got back to the starting point where Curt Segeler in his usual affable and efficient way helped out in the identification of special specimens.

Other minerals collected were some albite, schorl, books of muscovite, biotite and phlogopite, smoky and milky quartz.

Most of the group left around 3 P. M. but some die-hards remained indefatigably working the dump.

Victor Pribil, Secretary
47-18 37th Street,
Long Island City 1, N. Y.
Tel. RA 9-8178

Rockland County Mineral and Gem Society Spring Valley, New York

Our Officers were installed at our Annual Xmas Dinner on Dec. 16, 1955, commencing their duties in January 1956. Mr. William Rode as President; Mr. Edward Howard as Vice-president; Mrs. Marguerite R. Collyer as Secretary & Treasurer; Mrs. Agnes Pugsley as Corr. secretary; Messrs: George Weeks; Gilbert Pugsley and Louis G. Collyer as Directors.

Twenty-two members and wives attended this dinner, it was a gala affair, the settings were in keeping with the season and hobby. Our place cards were a booklet entitled "The Utah Copper Story", these were from the Kennicott Copper Co. On top of each book was placed a large fluorite crystal from the Cave in Rock, Ill., these were donated by Mr. John Ober, the well-known dealer of Paterson, N. J. With this was a very novel match box, the cover of which was of metallic colors, Mrs. Agnes Pugsley had designed floral and geometric designs which were composed from tumbled baroque gems of all colors by being pasted on the cover. Not one member used the matches as they were too lovely to dispoil.

Mr. Louis G. Collyer handed the gavel over to Mr. William Rode, toasts were drunk to the continued growth and success to our Club under the very able guidance of our new officers. After dinner dancing continued until the wee small hours.

The opening gun at our January meeting was a great success. Mrs. William Jordan, our newly appointed program chairman, succeeded in securing the Bell Telephone Co., services for the showing of their wonderful program, "Jewels for a Queen". This should be a "must" for all Mineral Clubs. The Bell Telephone Co., take entire charge of the program, and is without charge. It is the story of the finding, history and romance of the most outstanding diamonds, such as the "Koh-i-Nor" recut in 1862, weighing 106 carats and given to Queen Victoria of England, now part of the crown jewels. The "Cullinan" which in the rough weighed 971 carats, from which three large gems and many small ones were cut. The Orolloff, which was part of the Russian crown jewels, this is purported to be stolen from the eye of a Brahman idol. The Hope diamond, 44 carats, is one of the finest blue diamonds in the world and is now owned by Mrs. Harry Winston, of N.Y.C. All of these stones were shown in replica whilst the history of each gem was narrated by Miss Vail of the Bell Telephone Co., during which slide projections were shown in conjunction by the projectionist also of the Bell Telephone Co. After the program, questions were asked and the replicas examined. Refreshments were served of home baked cookies and coffee.

We extend a cordial invitation to any who would like to visit us. Our meetings are held on the last Friday of each month at 8:00 p.m. at the Finkelstein Memorial Library, Spring Valley, N. Y. If you would like further information, please write to Mrs. Marguerite R. Collyer, Secretary, West Nyack, N. Y.

Mrs. Marguerite R. Collyer
Corr. Sec.,
West Nyack, N. Y.

Queens Mineral Society September 26, 1955, Meeting

As usual the September meeting was devoted to the annual exhibit by our club members of specimens which they had collected during the past year. Many fine specimens were on display. Among them were specimens of Canadian Apatite, Zircons, Betafite xls and micas; New England Phosphates, Epidotes, Samaraskites and Vesuvianites; Virginia Ky-anites and Fuchsites.

The prizes were awarded as follows:

First Prize:—Tom Ronan.

Curt Segeler's and Ed Marcin's collections were so close that the judges awarded a tie between second and third prizes.

October 24, 1955, Meeting

After the usual business was taken care of we were glad to hear in a report on the Eastern Federation Convention this year in Washington that several prizes were won for lapidary work by Mr. Vic Pribil, a member of our club.

The program for the night was given by Curt Segeler and Tom Ronan and was on the differences between acid and basic pegmatites. Well shown were how these pegmatites differ in their minerals and structure. Canadian basic pegmatites contain rarer minerals such as rare earths, nepheline etc., and these minerals are easy to find especially in the segregated pegmatites. On the other hand New England Acid pegmatites are characterized by Phosphates, lithium, beryllium and silica minerals. The program was well illustrated with slides and was enjoyed by all.

Thomas Ronan
Secretary Pro Temp.
Queens Mineral Society
2436 Marion Ave.
Bronx 58, N. Y.

Rochester Academy of Science Mineral Section

During the past summer, members of the Rochester Academy of Science, Mineral Section of Rochester, N. Y., enjoyed many pleasant hours of collecting during the annual four field trips.

On May 28, Mr. Daniel Sass of Alfred University, Alfred, N. Y., conducted a tour through the new Ceramics building at the University. Approximately twenty-two members of our club were then taken on a fossil collecting trip to outcrops of the shales and sandstones of the Upper Devonian in the Alfred area.

On the week-end of the Fourth of July, Dr. B. M. Shaub of Smith College, Northampton, Mass., led a group of around thirty to the Chester Talc Mine at Chester, Ver-

mont. Some of the minerals collected were: prochlorite, talc, actinolite, hornblende, pyrite crystals in schist, magnetite crystals, tourmaline, etc. From there we were taken to the pegmatites of New Hampshire where some beryl, garnet, apatite and feldspar were collected. On the last day of the trip we went to Plainfield, Mass., where we acquired rhodonite specimens.

In August, the 13th, to be exact, a good turnout was expected at the Middleville, N. Y. "Herkimer Diamond" locality. However, it seems that the hurricane Connie, chose that time to strike. Coming down the Thruway from Rochester, some of the cars, ours included, that had no radios did not know of the storm and proceeded to the meeting place and started operations. It was a dandy wet, windy and muddy place, but fourteen stalwart members kept going until mid-afternoon and then decided to call a halt. Only one of our members, Don Armistead, found a nice pocket of "Diamonds" and collected about one hundred nice crystals from it. Others were content to pick up some matrix specimens and singles that had weathered out. The trip home found roads blocked with trees and wires, but all arrived safely.

On September 17th and 18th, we were again on our way into the Adirondacks to the St. Joseph Lead Co., Balmat, N. Y. We had previously obtained permission through Mr. Severn P. Brown, geologist for the company. He led us to the dump area where sphalerite and pyrite were collected in quantity. From there, we went to the dumps of the International Talc Mine at Fowler, N. Y., where we obtained talc, tremolite, hexagonite and calcite. After that evening, we returned to the same locality equipped with ultraviolet lamps and resumed our collecting of fluorescent tremolite and talc. The next day saw us on our way to the famous locality for black tourmaline at Pierrepont, N. Y. Mr. Powers, owner of the land, had made arrangements for a bulldozer to turn over some of the more likely places. Around thirty members aided the elements in leveling the landscape. Some nice groups of tourmalines were found, along with numerous broken crystals. Several fine families of snakes were unearthed and scattered, along with some of the women collectors, throughout the countryside.

Our regular meetings started the first Thursday in October and will continue on the first Thursday of each month until May. All visitors are welcome to attend the meetings which are held at the Rochester Museum of Arts and Sciences, Rochester, N. Y.

Robert M. Eaton
54 Heberle Rd.,
Rochester 9, N. Y.



Members of the Rochester club at work at the Middleville.
N. Y., "Herkimer Diamond" locality.

**Buffalo Society of Natural Sciences —
Buffalo, N. Y.**

The Geological Section of the Buffalo Society of Natural Sciences meets at the Buffalo Museum of Science on the first Friday evening of each month. Officers for the year 1955-56 are the following: Mr. W. A. Scotchmer, President; Mr. C. J. Awald, Vice President; Dr. H. E. Stadlinger, Secretary; and Miss K. A. Schenck, Treasurer.

On October 7, 1955, the Section heard Mr. Alexander Crinze speak on *Gems — Semi-precious and Precious*. The talk included natural, artificial and synthetic gems. Localities for the natural gems and methods of manufacturing the synthetics were discussed. At the conclusion of the talk Mr. Crinze had many beautiful specimens for study. Some of these were purchased by the members.

The Section was fortunate to have for its November meeting a talk by Dr. V. B. Meen, Head of the Division of Mineralogy and Geology of the Royal Ontario Museum and President of the Walker Mineralogical Club of the University of Toronto. His topic, *A*

Mineral Collector in Canada's Maritimes, was illustrated with color slides from Dr. Meen's collection.

Mr. William Dawson, a student of Gemology at the Morrisville Agric. and Technical Institute, gave the December talk on *Collecting Mineral Specimens in Ontario*. Minerals from Bancroft, Cobalt, Sudbury, Black Rapids, and Kirkland Lake were shown in conjunction with color slides. A summary of new Canadian Laws of interest to the mineral collector was discussed.

On January 6, 1956, the Section heard a talk by Mr. Clifford J. Awald, Vice president of the Section and Instructor in Mineralogy in the Buffalo Museum's Adult Education Program on his specialty, *Inclusions in Quartz Crystals*. The talk was illustrated with color slides of Specimens from Mr. Awald's collection which were photographed by Mrs. David E. Jensen, nationally known Mineral photographer of Rochester, New York.

Dr. Henry E. Stadlinger, Secty.
The Geological Section, B.S.N.S.
Buffalo Museum of Science
Buffalo 11, New York

Westminster Mineral Club

In February our club will celebrate its first birthday. Our seven original members have grown to eleven, of which four are men and seven women. All agree it has been a very profitable year considering the close friendships formed and the mineral knowledge gained. Six field trips were made.

Easthampton, Mass., where Jack Kitson, well known to R & M, took us around the old lead mines in that locality, which yielded us chalcopryite, galena, barite, sphalerite, quartz xls, a few specimens of wulfenite xls and pyromorphite, and two specimens of cerussite. Mrs. Kitson treated us to coffee, milk and doughnuts when we arrived at 9:30 after a 55 mile trip. We also enjoyed a picnic lunch at noon on private property near a pool in the woods.

Chester, Vt. Here we found good magnetite octahedrons in schist, pyrite cubes and hornblende xls both loose and in chlorite schist, actinolite and talc. As Gassetts, Vt. is near Chester we went there looking for garnets in a silvery-colored mica schist, but the specimens weren't very good.

Alstead, Surry, and So. Acworth, N. H. Alstead furnished small pieces of aquamarine and blue-green beryl xls, but not gemmy. Also graphic granite, smoky, milky and clear quartz, black tourmaline xls in matrix, biotite mica, balls of muscovite mica, nice feldspar and fluorescent manganapatite. At Surry we found goethite and red hematite. So. Acworth is where the hexagonal cross-sections of green beryl xls, 12 to 16 inches across, stare you in the face high up in the walls of white quartz. Some pale rose quartz was found here as well as small pieces of green and golden beryl.

Warwick, Mass. On this trip we had Hugh Albee of Orange to guide us around. We first stopped in the Tully Mt. area of Athol where massive black tourmaline, mixed with quartz and very fine epidote xls was found. Also a poor grade of steatite, some containing pyrite cubes. On a back road to Warwick some strongly magnetic magnetite and micaceous hematite was obtained. Glacial grooves in a ledge were also seen here. At Warwick we got massive garnet, epidote and quartz all in one specimen, making a very showy piece. Magnetite is often mixed in and sometimes clear quartz xls. Small quartz xls, some doubly terminated, were found loose in the dirt.

Lithia (Goshen) Mass., and Plainfield. At the Barrus Farm in Lithia, we found tourmaline of mixed colors, some dark green outside and paler in; some dark green with dark blue indicolite; others all indicolite. Goshenite is found here but we weren't for-

tunate enough to find any. Massive hornblende, small well-formed garnets in a dark schist and zoisite were obtained. At Plainfield where we went for rhodonite everything was blackened by manganese. However, we did find a boulder which yielded some nice pink material. Specimens of pyrite, magnetite and spessartite garnets were also brought back.

Westmoreland, N. H. Here is found green fluorite which fluoresces that beautiful blue under long wave ultra-violet light. Mr. and Mrs. Julian Wetherbee of Keene, N. H., guided us here as the mine is located off the road quite a distance and we weren't familiar with the spot. A few miles farther on at the Stoddard mine we got nice clusters of quartz xls.

August 28th a family picnic was held at the summer camp of Mr. and Mrs. Butterfield on Lake Monomonack in Winchendon Springs. During the morning we went to the Monadnock Mineral Shop in Marlboro, N. H., after which we returned for our picnic lunch, boating, bathing and a general good time together.

December 15th a Christmas party was enjoyed at the home of the president, where everybody took a field trip through the house via hidden slips of paper with written instructions which led to a 'pocket of topaz xls' where each found one. Each member brought an original poem about minerals which he had written, and these created a lot of mirth.

We are now holding our meetings in the homes of the various members. One of our projects is re-labelling the old collection in our town library. Needless to say we are looking forward to another inspiring year.

Doris C. Butterfield, Pres.
Westminster Mineral Club,
Westminster, Massachusetts.

Gem Cutters Guild of Baltimore

On January 31st, the Gem Cutters Guild of Baltimore concluded a very satisfactory three weeks exhibition and working demonstration of its work at the Savings Bank of Baltimore, Baltimore and Charles Streets. This is the largest mutual savings bank in Maryland, and because of the great volume of business it transacts, a large segment of the public was reached. The bank displayed very striking posters, inside and outside the building, advertising the exhibition and stating that there would be working, demonstrations given on the lapidary wheel every banking day from 11 A.M. to 1 P.M.

Between two tastefully arranged showcases, a small lapidary unit was installed. It was

very interesting how we managed to have our members there for the whole three weeks between January 10th and 31st. William J. Engelbach is, fortunately, retired and came to demonstrate the work the full two hours every Thursday. Others, employed not too far away, gave up their lunch hours to explain the lapidary work—Miss Florence Pearson, Clinton C. Davison, Edward J. Dietrich, and John M. Wise. Miss Catherine Muffoletto's very kind employer extended her lunch time to she could be there two full hours on Tuesdays; and Miss Muffoletto's mother, Mrs. Angela Muffoletto, gave up some of her time also to assist on Tuesdays. Mrs. Elsie Kane White and James Poetzsch came long distances from their homes to help spread knowledge of our hobby, and Mrs. Ruth G. Emmart also helped.

A very delightful aspect was the generous reception given us by the officers and employees of the bank. Each Guild member who assisted in the demonstrations of the work was invited to have lunch afterward at the bank in its cheerfully decorated dining room. The bank's interior was recently remodeled, and it sponsors many interesting exhibitions.

Our thanks go to the bank's president, Mr. S. Page Nelson; Mr. Robert W. Thon, vice-president; Mr. Frank W. Carman, Jr., assistant vice-president; Mr. John H. Meyer, and all the others who made the three weeks' show possible—and so very pleasant.

Ruth G. Emmart
3551 Newland Road
Baltimore 18, Md.

Meeting Held by South Jersey Rockhounds

An enthusiastic group of 32 people interested in the study of rocks, minerals and lapidary work, met last Wednesday night at the Woodbury High School, Woodbury, N. J.

Mr. Clayton C. Hamilton, of Ardmore, Pa., a member of the Mineralogical Society of Pennsylvania, and a well known collector and distributor of gem materials, gave an interesting talk on gemstones that can be collected, cut and polished. He had a cabinet of fine specimens on display.

The meeting was in response to letters sent out by Arthur Gieves of Riverside and Herbert T. Borden of Woodbury in an effort to get a club organized. People were asked to bring a few of their specimens, and there was a very good response. There were samples consisting of rocks, minerals, crystals, gems, cut and polished minerals, petrified woods, fossils and fluorescent minerals.

The group unanimously voted to hold another meeting on Wednesday evening, March

14. Time and place will be announced.

Arthur Gieves,
504 Third St.
Riverside, N. J.

North Jersey Mineralogical Society

Officers of the North Jersey Mineralogical Society for 1956 are: President, Warren L. Duncan of Hackensack; vice president, John M. Weigand of Paterson, re-elected; secretary, Mrs. Elsa Milligan of Westwood; treasurer, Ray Jones of Allendale; member of board of directors for three years, Gene Vitali of North Haledon. Officers were chosen at the January meeting of the Society in Paterson Museum.

The program topic of the meeting was entitled "Things to Know About Minerals" and was directed by the program chairman, William C. Casperson. He asked questions relating to fairly well-known but seldom mentioned facts about minerals, such as: What is the heaviest mineral? What minerals can be woven into fabric? What minerals show the greatest variety of crystallization? What minerals are normally liquid?

Anybody who could provide the answers, did so, and frequently there was a unanimous response, from everybody. After the meeting several members expressed surprise that they knew so much, and asked for another program of the same type.

Harold Gabriels was leader of the fifteen-minute mineral study period. He took Lithium as his subject and presented an excellent paper on this mineral which has lately become very important economically. He showed numerous fine specimens of the four lithium ores: Amblygonite from Canada; spodumene and lepidolite from Maine; lepidolite and petalite from Africa. The petalite was in several colors, pink, green, gray, blue, and one specimen combined all of them.

Earl Eilerts will be the leader at the February meeting.

February Meeting

Rare earths are more plentiful than their name would indicate.

One at least, of the group is so rare that it does not exist except in atomic piles.

With these somewhat cryptic statements, Richard Mandle of Rare Earths, Inc., began his talk to members of the North Jersey Mineralogical Society at its February meeting in Paterson Museum.

Mr. Mandle's business has its laboratories at Pompton Plains, N. J., and is engaged in the fascinating and complicated processes of separating the several elements in the group from each other and preparing them for the uses to which they are being put with increasing frequency as technology progresses.

Fifteen elements make up the rare earth group, each one having a name which sounds highly technical, like Dysprosium and Praseodymium. The missing one? That is Promethium and has not been found in nature, Mr. Mandle said.

Monazite is the chief mineral from which the rare earths are obtained commercially, with bastnaesite being used to some extent. Monazite is found in granites and in metamorphic rocks. It is a phosphate, yellowish to reddish brown in color, is heavy and radioactive

The radioactivity is due to contained thorium in varying proportions. Thorium is not a member of the rare earth group, but has recently become a very important element. It can be used in atomic reactors much the same as uranium, and is about three times as plentiful in the earth's crust.

Monazite as sand in commercial quantities is found in North Carolina and Florida, and as crystals and massive rock in New Mexico and California. Large beds of monazite sands occur on beaches in India, Africa and South America also. Monazite has been found in New Jersey, but not of commercial grade nor quantity, Mr. Mandle said.

Bastnaesite is heavy and somewhat similar in color to monazite. It is not radioactive and is less plentiful, most of the commercial supply coming from New Mexico.

Of the rare earth group the most plentiful element is Cerium, with the others occurring in varying amounts, almost to the vanishing point.

In the laboratory the monazite is ground to fine powder and put through electrostatic and magnetic separation processes to obtain the desired oxides, principally Cerium, Thorium and Yttrium. These go through further refinements and come out ready for market in widely differing price ranges, from \$1.75 per pound for one to \$50 per gram for another. This latter works out to something over \$20,000 per pound.

Mr. Mandle said new uses are being found for these oxides all the time, some of which are top secrets and he could say nothing about them. He said Thulium, which gives off gamma rays, is capable of being put into a small box like an ordinary camera and taking as good a picture as a heavy x-ray machine.

He showed samples of the rare earth ores, the products derived from them, and some of the products made from them, such as lighter flints and polishing powders for lenses, television tubes and gems.

Earl Eilerts led the mineral study period, giving an excellent paper on the mica minerals and showing specimens of the various types. Edwin Judd will be the leader at the March meeting.

Seven new members were admitted to the Society.

Marian B. Caspersen
Publicity Chairman
9-11 Hamilton Street
Paterson 1, N. J.

Newark Mineralogical Society

The first meeting, following vacation, was a symposium of summer collecting, and many interesting specimens were shown.

On the 11th of October a dinner was held in celebration of the 40th Anniversary of the Newark Mineralogical Society. Approximately 90 members and guests attended, and it was indeed a gala occasion. Following the dinner, pictures of the Convention at Washington were shown, and there was a sale of minerals donated by the members of the Society.

The Newark Mineralogical Society was started in 1916, when a group of about eight people decided to meet regularly for the purpose of studying mineralogy and collecting mineral specimens. At that time there were only two other mineralogical societies in the United States. The Newark Society grew rapidly and now has approximately 150 members. Excellent programs, sponsored alternately by members and by guest speakers, as well as many interesting field trips—to various mineral locations, and to educational institutions, such as museums, private collections, etc., have brought increasing interest in this hobby, and the overflow meetings each month are also indicative of this interest.

At the November meeting reports were received from our delegate covering the Convention at Washington, and to Newark Mineralogical Society came the honor of first place in the Society exhibits. Following reports, colored slides of many of the exhibits were shown.

Mr. Schroeder, Program Chairman, had planned an exceptionally interesting program for the 40th Anniversary meeting in December. The guest speaker was Mr. George Switzer, Assistant Curator Division of Mineralogy and Petrology, Smithsonian Institute, National Museum, Washington, D. C. He spoke on the subject of "What the Science of Mineralogy owes to the Mineral Collector." Mr. Switzer has made an intensive study of the early days of mineralogy in the United States. He spoke of the early collectors and students of mineralogy, dating from about 1774 to the present time—of books and papers published by these people, and of the final disposition of some of the wonderful collections made. Most of these collections are now the property of museums—New York, Washington, Philadelphia, and of educational insti-

tutions—Yale, Harvard, and others. He mentioned particularly the Roebling collection which contained more than 16,000 specimens—this is considered one of the most complete collections and has a piece of nearly every mineral that has ever been given a name. The National Museum at Washington, D. C. now houses this wonderful collection. The Canfield collection, which had principally minerals from Franklin, N. J. is now the property of the Museum of Natural History in New York.

He spoke also of various magazines, the first of which, "The Exchanger's Monthly" was published in 1855. It was interesting to note that Mr. Switzer had found an account in the "American Mineralogist" of the 16th meeting of the Newark Mineralogical Society, with 11 persons present. One of those members, our Mr. Louis Reamer, former secretary of the Society, was present at the meeting today to hear Mr. Switzer's talk.

In closing, Mr. Switzer stressed the fact that collectors ARE an important part of the study of mineralogy—the contributions made by the collector in the past have been very important, and that future contributions may be of even greater importance.

Election of officers also took place at this 40th Anniversary meeting. Mr. Louis Eaton Shaw was reelected president; Mr. Edward R. DeRoo was elected vice president; Secretary, Miss Pamela E. Dye, and Treasurer, Mr. Samuel W. Brown.

Louise W. Borgstrom
Publicity Chairman, 1955

New Jersey Mineralogical Society

The Solar Battery was the subject of Calvin S. Fuller of the Bell Telephone Laboratories at the November meeting of the Society. He gave a technical talk on the battery accompanied by descriptive slides. Mr. Fuller also brought some working samples that were activated by electric lights. With only electric light power and a small solar battery, it was possible to ring an ordinary bell, have current for a telephone and various other electrical experiments. Mr. Fuller also told of an actual experiment now in progress by a telephone company in the southwest.

During the winter months when it is impossible to plan field trips in this part of the country, the field trip committee plans a series of sight Identification Sessions at which members may bring any odd or unidentifiable minerals to be identified by other members of the organization. At the Session in November Bob Stirling of the NJMS displayed a suite of Franklin minerals and discussed their characteristics. At this meeting it was discovered that Bob had 120 different Franklin minerals.

At the December meeting, Mr. Hensleigh C. Wedgewood, President of the Josiah

Wedgewood and Sons Inc., gave us a most enlightening talk on the processing of the clays in making Wedgewood china. He brought a number of colored slides to illustrate many of the fine old Wedgewood pieces on display at the Wedgewood museum at Barlaston, England. Last year, Mr. Wedgewood gave us the story of Wedgewood and this year went on to a more technical discussion. He has proved a most entertaining speaker with a keen sense of humor.

The January meeting of the Society featured Mr. F. L. Kadey Jr., of Johns Manville, who spoke on diatomaceous earth, its origin and its present day uses. His talk was well illustrated with many slides that helped picture the over ten thousand forms in which diatoms are found. There are many locations on the east coast but the largest formations are found on the west coast. The deposit that Johns Manville mines in California at Lompoc is 900 feet thick, 3/4 of a mile across and three miles long. It is the largest and most pure deposit yet discovered. The many uses of diatomite include antibiotics, filters, filler for plastics, car and silver polishes and insulations. Many are the uses for these microscopic plantlike organisms like algae which are found in both salt and fresh water.

The February meeting is turned over each year to the Lapidary group of the Society, and this year a most impressive display of the members work was exhibited at the Plainfield Library. About twenty members exhibited their work in facet cutting, making of cabochons, silver jewelry and flatware, spheres, polished geodes and bookends. The Imperial Jade, Ltd. had a most interesting showing of their Wyoming jade used in jewelry and also made into carvings and decorated boxes. Maxwell Perry was on hand to answer any questions pertaining to the exhibit. The speaker at this meeting was Mr. Irving Brown of Linde Air Products Co., who spoke on the synthetic gems being made by that company. He brought a large display of star sapphires and rubies and also many boules and faceted stones of various colors. Mr. Brown talked of the method of producing the boules and most particularly about the problems of making the "star" stones. It is impossible to buy a star boule as they are cut and polished before they leave the Linde Company. In recent years there has been a great improvement in the method of manufacturing the star boules. The synthetic stones have been used for phonograph needles and watches. A very exciting time was had by all and the evening was concluded with refreshments served by the committee.

On February 28th there will be a Sight Identification Session with member, Neil A.

Wintringham speaking on his specialty, pegmatites.

(Mrs.) Leigh C. Thompson
1668 Oliver Street
Rahway, N. J.

Gem & Mineral Society of the Virginia Peninsula, Hampton, Virginia

At the January meeting of the Gem and Mineral Society of the Virginia Peninsula a talk and display was given by Mr. Phil Clark, an expert on the American Indians. Mr. Clark and his daughter Margaret were dressed in authentic Plain's Indian costumes made by Mr. Clark. Mr. Clark's talk centered on the use of stone made by the North American Indians and how they worked it. He showed his collection of arrow and spear point, axe heads, awls, scrapers, paint pots, and other polished and chipped utensils. His collection included three Folsom points. In conclusion Mr. Clark performed the Navaho medicine man's Feather Dance.

Mr. George C. Barclay spoke February 14 to the Gem and Mineral Society of the Virginia Peninsula. His topic was "Yorktown Fossils". The banks of the York and James Rivers in Virginia are the best fossil beds of the Miocene Age in the United States. Mr. Barclay displayed a few of the fossil shells he has collected and cataloged. Since his collection is quite extensive, this was a good sized display.

Mary Ann Kelley
Club Reporter
1225 - 22nd St.
Newport News, Va.

Mid-West

Club Suggested for Findlay, Ohio

We are beginners in the collecting of rocks and minerals but we love it very much. Our nephew got us interested about six years ago and I guess we will be at it for the rest of our lives.

We would like to get a mineral club started here in our city as the nearest club to us is about 60 miles away, in Toledo, Ohio. We have a population in Findlay of about 35,000, so a good club could be organized.

All readers residing in or near Findlay who may be interested in forming a mineral club are requested to contact me.

Mrs. Lloyd Decker,
R2, Findlay, Ohio.

Cincinnati Mineral Society

The following are officers of the Cincinnati Mineral Society for 1956: President, Dr. A. K. Presnell, 3315 Queen City Ave., Cin. 38, Ohio; vice president, Harry B.

Heiman, 1271 Sutton Pl., Cin. 30, Ohio; treasurer, Fred Keitel, Route #4, Harrison, Ohio; secretary, Miss Elizabeth Brockschlaeger, 518 E. 4th St., Cin 2, Ohio; corresponding secretary, J. W. Pagnucco, 130 Vermont Ave., Wyoming 15, Ohio.

Meeting Place, Ohio Mechanics Inst., 12th and Walnut, Cincinnati, Ohio. Meetings are held at 8 p.m. on the last Wednesday each month. Visitors are welcomed.

Chicago Rocks & Mineral Society

The monthly meeting on February 11th was a happy one as the members of the Rocks and Minerals Society celebrated their tenth anniversary.

The treat of the evening was the speaker, Mr. H. A. Walstrom, sponsor of the "Prospector Club", owner of Uranium Ore and Supply Co., Manufacturers of Geiger Counters, Scintillation Instruments for Prospecting. Mr. Walstrom, also a miner of uranium in Idaho and Colorado, gave a lecture on prospecting, told of a miner's hopeful findings, the miners' laws he must abide by and the formality after finding uranium.

Mrs. Walstrom displayed pieces of colorful pottery. She told the members that uranium had been mixed in the ingredients of the ceramic and when baked in the kiln, different colors appeared in the pottery when heated at various temperatures.

Des Moines Lapidary Society

The Des Moines Lapidary Society elected Martin McIntire president for the ensuing year. His address is 343 58th St.; vice president, Ray Ruehl. Our retiring president, Gus Brown, was elected liaison officer, and thru him we expect to have many pleasant contacts with our brother rockhounds.

Our business meetings are held the first Thursday of the month. We hold our social meeting at the beautiful Art Center on the third Saturday. We entertain our guest members and all interested friends. We display our prized minerals and rocks and hold contests on beauty and workmanship. We have a large room which is filled to capacity.

Press Correspondent—Suzy Q.

The first show of the Des Moines Lapidary Society will be held at the Art Center in Des Moines from May 3 thru May 20. There is no admission charge. There will be a large display of finished lapidary jewelry and rough stones from which they are cut—the method of mounting transparencies in shadow boxes—large mobiles in gem stones—and a totally new method of mounting free forms without the use of bell caps, drilling or wrap-arounds.

A map of the United States—each State cut from a rock of that State—will also be featured.

This is a large cooperative project and we will be given every assistance possible by the Des Moines Art Center and the major newspapers who will have a big article covering this show including colored pictures in a Sunday edition at a later date. We hope for other local publicity. All entries must be approved by our show committee and by the Art Center, for excellence in workmanship, beauty and originality. We are therefore expecting an outstanding show.

The show will be open every day with the exception of Monday, and will be open on Thursday evenings. Every possible friendly courtesy will be extended to visiting Rock Hounds—be with us and have fun. There will be several sparkling features for your pleasure.

Mrs. Roy Bennett
924 Loomis Ave.,
Des Moines, 15, Iowa

Cedar Valley Rock & Mineral Society

On January 18th, Mrs. Frederick F. Stark gave a talk on her trip through the copper smelter at McGill, Nevada. Preceding her talk she told about the Kennecott Copper Company's various mines and pits and about the structure of the Ruth (Nev.) pit and its rock and soil structure.

Mrs. Stark prepared a paper on "Rocks and what they tell us" that was read by a member of the Society.

At the February meeting the Society enjoyed an interesting and instructive talk by S. M. Pattie on "Determining the radio-activity of ore and mineral samples." His talk told how to lay out the ground to find out the percent of radiation. Mr. Pattie is a physics teacher in our school system.

H. M. Stark, Sec.-Treas.
1627 B Ave., N.W.,
Cedar Valley, Iowa

South

Lapidary Arts Guild of Austin

The Lapidary Arts Guild of Austin held its business meeting at the Odom's on January 19th.

Since the Texas Federation awarded the show to the Guild, to be held in Austin, May 11, 12, 13, the members have been very busy with plans for the show.

Every member is on two or more committees, but all plans are ready and in effect. From all indications this will be one of the best shows held this year.

Over two thirds of the dealer spaces have already been contracted for in just the first three weeks. Any dealer desiring space write to

W. R. Odom
Star Route A, Box 32 C
Austin, Texas.

Oklahoma Mineral & Gem Society

The March meeting of the Oklahoma Mineral and Gem Society was held in the home of Mr. and Mrs. Alvin Markwell with 55 members and guests present. Film shown was "How to Cut a Cabochon", and then the group was divided into groups in order to take a tour to Alvin's rockshop. In the rockshop various rocks were on display and various members told where the rocks were found and what could be done with them after the rock hunting was over.

Mrs. Domer Howard
1229 N.W. 47th St.
Oklahoma City 6, Okla.

South West

Mineralogical Society of Arizona

The Mineralogical Society of Arizona celebrated its 20th anniversary Dec. 2 with a full house and a number of charter members present. Arthur L. Flagg gave a history outline of the society, describing how he and Luther Stewart had organized it in 1935. Flagg had been interested in minerals since 1894 and was one of the first subscribers to ROCKS AND MINERALS, the oldest mineral magazine in the U. S. He paid tribute to H. S. Keithley, now in Colorado, who for many years was the friendly and efficient secretary of the MSOA.

When the Rockhound Record was instituted, a prize was offered for a fitting name for it. Dr. McKahn's son submitted "Rockhound Record" and won a vanadinite specimen from the Apache Mine.

"There were times," said Flagg, "when the MSOA was the largest mineralogical society in the U.S. with a membership of 277.

Jim Blakley and Jack Clark were the first junior members. Each told how their interest in minerals many years ago led them to follow Mr. Flagg and Mr. Stewart around asking questions incessantly. "We literally tied ourselves to Mr. Flagg's coat tail," said Jack, "and today we are all still dependent upon him."

Dr. and Mrs. Richard M. Pearl were guests at the meeting. Dr. Pearl told how the Rocky Mountain Federation was organized in 1941. Mr. Flagg was the only delegate from the MSOA. Soon thereafter he was elected federation president. "During World War II," Dr. Pearl said, "it was Mr. Flagg who held the federation together.

"As president of the American Federation," Walter Wells stated further, "Arthur Flagg now represents all the rockhounds in America. We are all keenly aware of the initial honor which that hold for the MSOA."

At Mr. Wells' suggestion, it was unanimously voted to confer Mr. Flagg an honorary life membership in the MSOA, the

Rocky Mountain Federation and the American Federation.

A picnic birthday party was held near the Estrella Mountains Dec. 4, near a group of rare elephant trees, and prehistoric petroglyphs.

At the Christmas party Dec. 16, there was an attendance of 112, including 10 guests and 26 juniors.

W. Walter Wells gave the 5 minute talks for John Hense and Joe Harris, who were absent due to illness.

Moulton Smith told of a rockhound who lived in Yavapai County around a thousand years ago, whose implements were all of stone, and whose ruins are now covered with sand and pine needles in the Prescott Forest. For proof that he was a rockhound, Mr. Smith displayed an unusual specimen of epidote crystals found in the ruins—a specimen that could neither be used for implements nor for jewelry.

Entertainment furnished by the juniors: Readings by Jimmy Nelson; violin selection, "Rudolph's Red Nose Reindeer," by Carole Mosiman, piano accompaniment by Rita Mosiman; vocal selections, "O Holy Night" and "Jesu Bambino", by Rita Mosiman; piano accompaniment, Fay Webber; violin, "It Came Upon The Midnight Clear," by Carole Mosiman, piano accompaniment, Rita Mosiman.

Group carols were sung, led by Russell H. Trapnell. Refreshments: Susan Cummings, chairman, assisted by Mrs. Ferris, Mrs. Van Horne, Trudy Mills and the junior girls.

An announcement was made of a 4-week evening course beginning Jan. 3, on how to prospect for uranium and other valuable metallic and non-metallic minerals. The course is to be given at Phoenix College by Dr. Richard M. Pearl. Dr. Pearl is visiting professor of Geology from Colorado College in Colorado Springs.

January Meeting

Isolated from the world on the highest peak in Colorado, is one of nature's most fantastic gem locations. Mount Antero in Colorado stands over 14,000 feet above sea level. Above the timber line, wracked by thunder storms in summer and covered by snow 10 months of winter, lies a curious hunting ground of 30 different species of gems, accessible for only two months of the year. At its extreme top lies Colorado's finest aqua marine deposits. "Mount Antero," said Dr. Richard M. Pearl, "is one of the most famous of mineral localities."

Dr. Pearl described mineral and gem locations of Colorado at the Mineralogical Society of Arizona's Jan. 6 meeting, with il-

lustrating colored slides.

He said Colorado led all states in variety of minerals in 1892. Today, California is in the lead. Colorado's enormous variety of minerals and gems is widely scattered but open to collectors and offers great opportunities.

Collecting areas are the Great Plains, the Southern Rocky Mountains and the Colorado Plateau.

Colorado has 52 peaks ranging from 10 to 14 thousand feet altitude, where great rains of the west originate.

At Gem Village everyone cuts gems for a living, and the whole community centers around the hobby.

At this meeting Arthur L. Flagg described rare scepter quartz crystals found on the Wickenburg field trip.

Ida Smith, Cor. Secy.
2010 West Jefferson,
Phoenix, Arizona

Rocky Mountains

Hells Canyon Gem Club

At the January meeting Larry Hanson gave a talk on the new find in this area, rare gem sillimanite, which he said is similar to jade in structure. It is found in beautiful chatoyant colors of white, cream, beige, brown, blue, black, and some red. It varies from 7 to 7½ in hardness and is extremely tough. The gravel bars along the Clearwater River (though it is a fisherman's paradise) are always well populated with sillimanite hunters, come rain or shine, cold or hot! He has made many sets of pendants and earrings, rings and brooches for friends and relatives who claim it is the prettiest they have seen.

Club officers for 1956 are: President, Larry Hanson; Vice-president, Bert Cole; secretary-Treasurer, Mrs. Larry Hanson; Northwest Federation Director, James Barker.

Hells Canyon Gem Club meets on the fourth Friday of each month at the V.F.W. Cabin at 8:00 p.m., Lewiston, Idaho.

Mrs. Larry Hanson, Sec'y.
402-D 12th Ave.,
Lewiston, Idaho.

**INVEST
IN GOOD
MINERALS**

Publications Recently Received

Pearl—Rocks and Minerals. By Richard M. Pearl, 275 pp., 35 illus., 5 X 8. Published by Barnes & Noble, Inc., 105 Fifth Ave., New York 3, N. Y.—\$1.95.

Rocks and Minerals is intended to present in popular language for the general reader the most recent accurate knowledge about the entire range of the mineral kingdom, a subject of ever-growing significance in this second half of the twentieth century. It covers minerals and rocks, ores and metals, gems, crystals, and meteorites, as well as artificial minerals—from their origin and world-wide occurrence to their current industrial uses.

This book explains how rocks and minerals are classified, how they can be recognized and identified, and how they should be collected and displayed. Radioactive minerals are emphasized, befitting their strategic importance in today's peacetime economy and international tension. Fluorescent minerals, another area of outstanding interest, are also given special treatment, as are meteorites, which are yet the only tangible evidence of the outer space, into which man is just beginning to venture. Prospecting for uranium and other minerals is described, together with the methods of mining them.

Italics emphasize essential scientific terms when they are first presented in the text. A selected, annotated reading list is given, along with a list of the national magazines in the United States devoted to the mineral-collecting hobby. A glossary and a classified index are other features of this book. The photographs and drawing are well chosen to illustrate the text.

Knoerr-Lutjen—Prospecting for Atomic Minerals. By Alvin W. Knoerr and George P. Lutjen, 211 pages, 21 figs., 5x8. Published by McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York 36, N. Y., — \$3.95.

Written in simple, nontechnical terms by two mining experts, this complete handbook shows how anyone, with little or no knowledge of mining or geology, can prospect for valuable atomic minerals. Modern equipment, basic survey instruments, radiation detectors, health precautions, and the use of maps are thoroughly covered. There is up-to-date information on how to obtain, protect, and prove a claim, how to determine the extent and value of an ore body, how and where to sell, together with government price charts. State Federal mining laws are included, as well as maps of available areas and lists of promising locations.

Not since the '49 Gold Rush has there been a mining boom to equal the current uranium bonanza. Millions of Americans are again

dreaming of striking it rich, and thousands will actually stake out claims in the vast, unexplored regions of the Colorado Plateau, Washington, Oregon, California, Canada, and the many other potential areas in the Middle Western and Eastern states. Not only uranium but all marketable atomic minerals are discussed in this handbook, including those containing thorium, lithium, and beryllium. For all interested in this new, exciting, and profitable venture, whether as a vacation pastime, a hobby, or a part-time pursuit, **PROSPECTING FOR ATOMIC MINERALS** will prove the perfect guide—simple, authoritative, and comprehensive.

Jay—Atomic Energy Research at Harwell. By K.E.B. Jay, 143 pages, 19 plates, 9 figures, 5½ x 8¾. Published by Philosophical Library, Inc., 15 E. 40th St., New York 16, N. Y.—\$4.75.

This book from the United Kingdom Atomic Energy Authority carries forward the story of the Atomic Energy Research Establishment from the point at which it was left in their last book ("Harwell—the British Atomic Energy Research Establishment") up to August 1954, when the United Kingdom Energy Authority took over from the Minister of Supply.

It describes the work done at Harwell between 1951 and 1954, and, in addition, changes in the regulations about the release of secret information have made it possible to discuss in more detail some of the subjects which were only mentioned in general terms in the earlier book.

The author is Principal Scientific Officer at Harwell since 1947.

Morrill—New Hampshire Mines and Mineral Locations. By Philip Morrill, 64 pages, 17 maps, 5½ x 8½. For sale by John Dillingham, Naples, Me.—\$1.25.

Here is another valuable publication for all collectors interested in New Hampshire minerals. We believe it is the most extensive listing compiled. There are over 500 mines, quarries and pits listed besides several hundred out crops, talus and glacial locations. The total is 64 pages of text and 17 maps. The information and maps make the locating of the major locations reasonably easy.

Mr. Morrill is the author of another very valuable publication which came out a year ago—"Maine Mines and Mineral Locations."

Ransom — Petrified Forest Trails. By Jay Ellis Ransom, 80 pages, illustrated, 6 x 9¼. Published by the Mineralogist Company, 329

S.E. 32nd Ave., Portland 15, Oregon—\$2.00.

The purpose of this book is two-fold. It is not a technical work in the sense that a textbook of paleobotany would be. Its primary purpose is to fill the needs of the many thousands of rock collectors who are interested in petrified wood, its origins and genesis, and to provide them with collected information on the subject. A secondary purpose is to describe the better known petrified forests of America and the locations where fine cutting material may be hunted.

PETRIFIED FOREST TRAILS is a guide to the petrified forests of America and a handbook for the collector of petrified woods.

Guide to Cincinnati Fossils

Prepared by the Geology Department of the University of Cincinnati, 47 pages, 8 plates, 6 figs., 8 x 10. Published by the Cincinnati Museum of Natural History, Central Parkway at Walnut, Cincinnati 10, Ohio. — \$1.25.

The Cincinnati region is world renowned for the variety, abundance and perfection of its fossils of Ordovician age. The fossil-rich bedrock is exposed in numerous streams in the rugged Ohio Valley, and in many road cuts and abandoned quarry sites in greater Cincinnati.

Few places in the world are so ideally situated for fossil collecting as Cincinnati. For generations, "dry-dredging" on the surrounding hills has been the avocation of hundreds of amateurs. These amateur collectors deserve much credit since many have made important discoveries, and their finds make up the bulk of many research collections. Through the years, an impressive number of youthful enthusiasts from this area have pursued their interests in the earth sciences, and matured into professional geologists and paleontologists. This edition of the guidebook is therefore fittingly dedicated to the contemporary generation of local fossil-hunters.

Australian Publication

THE GEOLOGY OF THE IRWIN RIVER AND ERADU DISTRICTS AND SURROUNDING COUNTRY, by W. Johnson, L.E. De La Hunty, and J.S. Gleeson, 131 pages, 6 plates.

Published by the Geological Survey, Perth, Western Australia.

Japanese Publications

The Science Reports of the Tohoku University—Third Series (Mineralogy, Petrology, Economic Geology). 28 pages, 6 plate, 7¼ x 10¾. In English.

Published by Tohoku University, Sendai Japan.

Tektites and the lost Planet

By Ralph Stair, National Bureau of Standards, Washington, D.C. Published by Smithsonian Institution, Washington, D.C. (from report for 1954, pages 217—230, 4 plates).

TEKTITES, or small glass objects from out of the sky, have long been of great interest to scientists in many fields. Found in great quantities (literally by the million) and in many places over the earth's surface, they have often been overlooked or else casually collected and used for such things as weapon points by the cave dwellers of paleolithic times. In Australia during the early gold-rush days, and in Texas, where they were popularly known as black diamonds, they were widely distributed for use as jewels and ornaments.

These little glass objects, known as australites in Australia, rizarites in the Philippines, bediasites in Texas, moldavites in Bohemia, billitonites in Borneo, and by other names, including Darwin and Libyan Desert glass, usually vary in size from a fraction of an ounce to almost a pound in weight. In shape they range from irregular to such symmetric forms as buttons, spheres, ovals, pears, dumbbells, teardrops, winged bodies, rods, and disks. In color, although the recovered object usually varies from black to a dark shade of green, thin polished sections range from nearly clear through various shades of green to amber or brown. The specimens found in each locality, usually spread over an extended area, as the south half of Australia, and a number of adjacent islands in the case of the australites, have common characteristics that indicate original association or common source. Similarly, the chemical and physical resemblances among tektites found in other localities justify their being grouped into similar subfamilies such as the moldavites of Bohemia.

Information wanted on North Carolina and Virginia!

Editor R&M:

Can you give me the name and address of someone in North Carolina and Virginia whom I might write to in order to obtain information about collecting grounds in those states? I plan to take a summer vacation trip to this area.

If you know of anyone wanting to be guided either to the Phoenixville or French Creek locations in my area, let me know and I will be glad to be of service to them.

Halfred Wertz,
2648 Summit Ave.,
Broomall, Pa.

March 30, 1956.

WITH OUR ADVERTISERS

Conducted by James N. Bourne
% Rocks and Minerals, Box 29
Peekskill, N. Y.

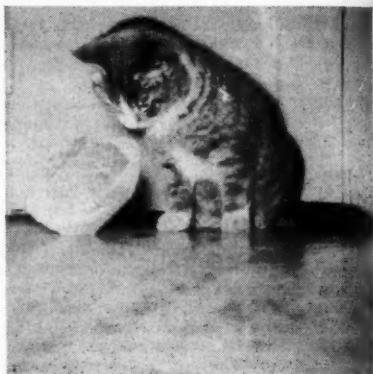
Advertisers are cordially invited to submit News Items to this Department.

Lloyd W. Harazin, Proprietor of Office Specialties, 2364 No. 58th St., Seattle 3, Wash., wishes to introduce himself to his customers and friends through this department and we quote him:

"In 1951 I had the urge to sell unglamorous office supplies such as rubber stamps, typewriter ribbons, stapling machines, etc. My next problem was, to whom I should sell? After reading a lapidary magazine from cover to cover I chose to sell to the 'rockhounds' who operate their own gem and mineral stores in communities where such items are not available at the store around the corner.

"All of this was started in a spare room of my home which I converted into an office, shipping and stock room. I began with the name 'Office Specialties'. Office Specialties is not a large organization but a little business operated by myself with hopes for a bright future. I hope you keep me in mind when office supplies are needed. I do not say, as many say, that 'your order is too small.' ---We might add a few words by saying that Mr. Harazin certainly has the determination to make himself a bright future and we wish him well in his chosen venture.

Walter L. Busch, 43-32 Elbertson St., Elmhurst 73, N. Y., has compiled and finished several manuscripts which are guides to mineral collecting in the East. Guides to Uranium and strategic mineral prospects in the U.S., Canada and Mexico. Guide to Gem deposits in the U.S., Canada and Mexico and gold and silver prospects in the U.S., Canada and Mexico. "Perhaps some of your subscribers may be interested in the above mentioned works which I am interested in selling!" — How about it readers?



**Mittens, a Rock-Kat, appraising
a fine rock crystal**

Minerals and Gems, P. O. Box 8072, Albany, New York, sends a photograph of their cat "Mittens" who is always poking his nose around their specimens. We've all heard of a rock-hound, but who ever heard of a Rock-Kat?

Scott J. Williams, 2346 N. Scottsdale Road, Scottsdale, Ariz., has just released another interesting price list as of March 1956, featuring many specimens from Mina Ojuela, Mapimi, Durango, Mexico. Also specimens from many other foreign localities. Have him place your name on his mailing list so you can receive his latest (5 pp.) Fine Mineral List.

Bob Daniel, prop. of Natural Gems, 795 E. Currahee St., Toccoa, Ga., sends a letter to us as of Feb. 21, 1956 containing this interesting paragraph.

"Am enclosing my copy for the March-April Issue of R & M. As you can see I'm trying to offer the unusual in minerals from this section and will do everything possible to give money value. In

other words, satisfaction or cheerful refund, and I don't intend to sell any 'junk.' I have mailed out some approval selections on receipt of a reasonable deposit, with good results."

C. L. Huntley, Executive director of Mineral Science Institute, 159 East Ontario St., Chicago 11, Ill., has sent to us as of his letter of Jan. 27, 1956, an attractive, beautifully illustrated brochure titled "Mineralogy and your future." A paragraph of his letter reads:

"We are preparing a copy of our brochure which gives a complete outline of our home study course, and the men who have prepared it. Backed by men of this calibre you may be assured that the basic training we are giving is sound."

You may send for this brochure by writing Mineral Science Institute at the above address.

Gilbert J. Withers, 1405 W. Paces Ferry Road, N. W., Atlanta 5, Ga., who we mentioned in our columns as of the Jan-Feb 1956 issue of R & M is now distributor for all specimen and amateur rough for Chatham Emeralds. A portion of his letter as of Jan. 19, 1956, reads as follows:

"I sincerely believe that I will enjoy a very large business by offering my materials at a close margin of profit and not competing with my dealer customers. We shall see. Under my exclusively wholesale policy I can distribute equitably and will."

Charles L. Bauer, 8 Main St., Franklin, N. J., wishes to be contacted relative to "Mineral Collection for Sale." 1200 specimens from Franklin and Sterling Hill, N. J., and 300 foreign specimens from all over the world are also included—many are fluorescent. Also has 2 fine display cabinets, 1 Mahogany, 1 Oak. This was the collection of his father, the late Lawson Bauer, who was considered an authority on Franklin minerals. Those interested in above collection may contact Charles L. Bauer Saturday and Sunday for appointment. Tel.

Vandyke 7-9043 in Franklin, N. J.

Announcing the opening of Ha Ha Tonka Gem Museum in the Ha Ha Tonka Park near Camdenton, Missouri on the beautiful Lake of the Ozarks by B. M. Brehm, formerly of 990 Dana N. E., Warren, Ohio on May 1, 1956. A portion of a recent letter from Mr. Brehm reads as follows:

"I will close my shop in Warren, Ohio April 1, 1956 to make the move. Ha Ha Tonka Gem Museum will feature gems, polished specimens and oddities. I will carry on my business of rough gem materials, slabs, etc. Your cooperation solicited."

Wilfred C. Eyles, Yermo, Calif., sends us this information from a recent letter:

"Everyone out here is doing a terrific business in the mineral game: looks like minerals, etc., has finally arrived by the looks of things. All the good minerals are about gone, and are getting awful hard to get. I will get a few from Australia for a few very particular customers. I brought back last trip a very fine crocoite, and a grand embolite all matted and coating cerussite, the latter from Broken Hill, Australia, which place, as you know, has really produced some grand material."

Harry Ross, 68-70 West Broadway, New York 7, N. Y., sends in this letter as of March 2, 1956 which reads as follows:

"May I call to your attention two items which I sell, and which I believe your readers should know about.

(1) The Gemstone Compendium of 30 stones. The most important use the collector can make of this set is as a "Standard of Comparison" against which he can check his own finds.

(2) Our ultra-violet bulb for only \$2.00. And remember this lamp works in any socket any place where 110 to 120 V. service is available. We have projected the U.V. light from this lamp up to 50 feet. At this price and with its fine results nobody need be without U.V. source."

FINE MINERAL SPECIMENS

Hemimorphite (Calamine). Sterling Hill, N. J. Cockscomb group. 3 x 4, \$6.50. Same, showing stellate structure. 3½ x 3½, \$7.00. Cockscomb group, with individual bladed xls on underside of specimen. Very fine. 2½ x 3½, \$6.00.

Azurite. Tsumeb, S. W. Africa. Choice single xls and xl groups. About 1 inch to 2 x 3. \$2.00; \$3.00; \$4.00; \$5.00; \$7.50; \$8.50; \$10.00; \$12.50; \$15.00. A magnificent tabular xl group, 3 x 4, \$100.00.

Tourmaline. Pierrepont, N. Y. Brilliant black hemimorphic xls on quartz. 3 x 3, \$5.00; 2 x 2½, \$2.00; 1½ x 1½, \$1.75. Gouverneur, N. Y. Brown xl in cavity lined with small pyroxene xls. 2 x 3, \$3.00.

Descloizite. Abenab Mine, Grootfontein, S. W. Africa. Large xls grouped to about 1 inch to 2 inches. \$2.50; \$3.00; \$4.00; \$5.00. Medium sized xls lining cavity 2 x 3 in limonitic rock 3 x 4, \$15.00.

Sphalerite. Franklin, N. J. An unusual specimen showing three classes of zinc mineral in same matrix. (Sphalerite-sulphide; Zincite-oxide; Willemite-silicate). With some calcite and franklinite. 4½ x 6, \$7.50. Fluoresces under short and long waves.

Tephroite. Franklin, N. J. Gray granular. With Zincite, franklinite and calcite. 3½ x 6, \$6.00; 2 x 3, \$2.50.

Pyroxene, variety Jeffersonite. Large twinned xl, with little calcite and granular garnet, franklinite. Termination partly exposed. 3 x 3½ x 5, \$10.00.

Pyrochroite. Sterling Hill, N. J. With some Mooreite and fluoborite. 2 x 2, \$7.50; 2 x 2½, \$3.50; 1 x 2, \$1.50; 1 x 1½, \$1.25; ¾ x 1, \$1.00.

Hyalophane. Franklin, N. J. 2 x 2½, \$5.00.

Margarosanite. Franklin, N. J. With hedyphane and Nasonite. Three rare lead silicates in same matrix. Some transparent green willemite. 1½ x 2½, \$3.50.

Postage extra. Excess refunded.

JOHN S. ALBANESE

Fine Minerals

P. O. Box 221, Union, N. J.

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